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MAPS

Northern Bombay.
Southern Bombay.
Bombay City.
Bombay Island

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PROVINCIAL GAZETTEERS OF INDIA

BOMBAY

VOLUME I

Bombay Presidency.—Bombay, the Western Presidency of British India, is divided into four revenue Divisions and twenty-five[1] Districts. It also includes numerous Native States. The territory thus composed extends from 13° 53′ to 28° 29′ N. and from 66° 40′ to 76° 32′ E. The British Districts, including Sind, contain a total area of 122,984 square miles, and a total population (according to the Census of 1901) of 18,515,587; the Native States under the Bombay Government cover an additional area estimated at 65,761 square miles, with a population of 6,908,648; total area, 188,745 square miles; total population, 25,424,235. In the geographical limits of the Presidency are included the Portuguese Possessions of Goa, Damān, and Diu, with an aggregate area of 1,470 square miles and a population (1900) of 531,798; also the State of Baroda, with an area of 8,099 square miles and a population of 1,952,692, which is under the political control of the Government of India. The outlying settlement of Aden has an area of 80 square miles, with a population of 43,974. The capital of the Presidency, to which it has given its name, is BOMBAY CITY, situated on an island on the shore of the Arabian Sea in 18° 55′ N. and 72° 54′ E. Physical aspects. Dimensions.

The Presidency is bounded on the north-west, north, and north-east by Baluchistān, the British Province of the Punjab, and the Native States of Rājputāna; on the east by the Native States of the Central India Agency, the Central Provinces, Berār, and the Dominions of the Nizām of Hyderābād; on the south by the Presidency of Madras and the State of Mysore; and on the west by the Arabian Sea.

[1] This total includes Bombay City and Island, which is treated as a separate District under a Collector, but does not include the new District formed in 1906 by the partition of Khāndesh.

Natural divisions.

Between these limits are contained tracts of country varying greatly in climate and physical aspects. Of these, the most important are Sind, Gujarāt, the Deccan, the Konkan, and the Carnatic. The District of North Kanara, at the extreme south of the Presidency, in so far as it can be brought within this scheme of division, lies partly in the Carnatic and partly in the Konkan.

Sind.

Sind, or the lower valley of the Indus, is the most northerly section of the Presidency. It includes the six Districts of Karāchi, Hyderābād, Thar and Pārkar, Lārkāna, Sukkur, and the Upper Sind Frontier; and also the Native State of Khairpur. It differs widely in physical features and climate, no less than in the language, dress, and customs of its inhabitants, from the rest of the Presidency, from which it is cut off by the desert or the sea. Cultivation in Sind is, as a rule, possible only where irrigation exists, and the province is thus dependent on the annual inundation of the Indus with its subsidiary system of canals. The surface of the land is a monotonous desert, interrupted by low cliffs or undulating sand-heaps, save only where the floods of the great river, or the silver streak of a canal, have transformed a waste of sand and scrub jungle into broad acres of smiling crop. Flat and arid for the most part, Sind possesses an indescribable charm in its wide expanse of reeds and water, where the floods lie held from the adjacent crops by giant banks of earth, and the silence is broken only by the cries of myriads of wild-fowl on the wing.

Gujarāt.

In striking contrast to the Sind desert, the plains of Gujarāt stand first in the Presidency for richness of soil and density of population. They are watered by many rivers, the most famous of which are the Narbadā and the Tāpti, whose valleys are sheets of unbroken cultivation. Towards the Rann of Cutch the rich plains pass into salt and sandy waste, and the subsoil is brackish. Gujarāt contains the Districts of Kaira, Ahmadābād, Broach, Surat, and Pānch Mahāls, with numerous petty Native States, of which the most important are Cutch, Morvi, Gondal, and Bhaunagar, situated in Cutch and the peninsula of Kāthiāwār. Of these, Cutch is an island lying between 22° 47′ and 24° N. and 68° 25′ and 71° 11′ E., cut off from the mainland by the great salt waste known as the Rann. Kāthiāwār is a peninsula lying between 20° 48′ and 23° 45′ N. and 68° 56′ and 72° 20′ E. It is connected with the mainland of Gujarāt by a neck of low-lying land which until 1813 was flooded during part of the year, and is still partly covered by a large lagoon, the NAL. The State of Baroda, though contained within this

geographical division, is not now politically attached to the Bombay Presidency.

The remaining portion of the Presidency is divided into high- and low-level tracts by the rugged line of the WESTERN GHĀTS or Sahyādris, which run parallel to the coast-line for many hundred miles. Perched upon these frowning eminences stand the hill forts famous in Marāthā history. Behind them lie the scantily watered tracts of the Deccan plateau, for the most part an almost treeless plain, sloping from the rock-bound Ghāt edge towards the level fields of Berār and Hyderābād. Protected by the hills from the south-west monsoon, which at times surmounts their crest only to hurl its heavy clouds across the continent leaving the land unwatered and untilled, the Deccan yields to much labour a bare measure of subsistence. In the valleys of the large rivers, where population clusters on the banks in busy towns, the soil is more productive; but the country is ever haunted by the spectre of famine. It breeds a race of sturdy husbandmen, who show a marked superiority over their Gujarāt brethren in their powers of resisting the rigours of a starvation diet. The Deccan Districts are Nāsik, Ahmadnagar, Poona, Sātāra, and Sholāpur. The Native States included in this area are few and unimportant. To the north of Nāsik, Khāndesh, in the Tāpti valley, is usually excluded from the Deccan as being more akin to the plains of the Central Provinces and Berār, especially in its rich fields of black cotton soil, growing excellent cotton and wheat. The Deccan possesses large tracts of rocky and uncultivable land. To the west, near the Ghāts, where the rainfall is heavy, the main crop is rice, grown in terraces in the broken country known as the Konkan Ghāt Mātha or Māval. Over the greater part of the *desh*, or level tracts, a light rainfall, if seasonable, produces good crops of cereals. The Deccan.

South of the Deccan, three Districts, Belgaum, Bijāpur, and Dhārwār, form the Bombay Carnatic, or Kanarese territory. The large Native State of Kolhāpur also forms part of the Carnatic, which is otherwise known as the Southern Marāthā Country. Owing to the edge of the Ghāts being thickly wooded on the west of these Districts, they enjoy a better water-supply than the arid Deccan plain farther north, and are also able to reckon on a more certain rainfall. In Dhārwār a system of numerous small tanks for water storage permits the cultivation of irrigated crops on a large scale. The greater portion of the above-Ghāt section of North Kanara District is covered with continuous forest. The Carnatic is thus a land of The Carnatic.

sweeping forest and well-watered fields, bearing rice crops beneath the storms of the Ghāt rainfall, and yielding a sea of wheat, cotton, and *jowār* beyond the zone of the monsoon's fury. Though the Western Ghāts are here covered with dense jungle, their line is more broken than in the Deccan, so that the rivers, which elsewhere flow eastward across the continent, sometimes turn towards the western coast-line in the Southern Carnatic.

The Konkan.

The low-lying tract below the Ghāts, termed the Konkan, contains the Districts of Thāna, Kolāba, Ratnāgiri, Bombay City and Island, the below-Ghāt section of North Kanara, and the Native States of Sāvantvādi, Janjīra, and Jawhār. It is a difficult country to travel in, for, in addition to rivers, creeks, and harbours, there are many isolated peaks and detached ranges of hills. Thus, in north-east Thāna the Deccan trap forms a high table-land, which passes southwards in a series of abrupt isolated hills to the bare flat laterite plateau of Ratnāgiri. The granite and sandstone hills of North Kanara are locally reckoned as distinct from the main range of the Western Ghāts, and the large proportion of forest it contains distinguishes below-Ghāt Kanara from the rest of the Konkan. The cultivation consists of a few rich plots of rice land and groves of coco-nut palms, watered by a never-failing supply from the storm-clouds of the south-west monsoon. Though in climate severely oppressive when the sun adds its power to the enervating influence of the moisture-laden atmosphere, yet the Konkan is unrivalled for beauty of scenery.

Scenery.

The peculiarities of soil, climate, and conformation thus briefly described result in a great variety of scenery. In Sind the eye of the traveller, fatigued by endless stretches of sand and scrub jungle, rests with relief on the broad expanse of the lagoons rich in waving reeds and clustering *babūl*. In Gujarāt the sandy waste of Cutch leads through the treeless, if more fertile, plain of Kāthiāwār to the well-cropped fields of the central Districts: a park-like territory intersected at intervals by the broad floods of its rivers, and well wooded, with many a noble tree to shade the approaches to its busy and populous towns. This is the garden of the Presidency. The approach to the Deccan plateau is guarded by the long line of the Western Ghāts. Though smiling with fern and foliage and glistening with the silver threads of numerous waterfalls during the summer rains, their rugged crests are, in the dry season, left gaunt and bare save when robed in purple in the haze of early morn, or touched to brilliance by the last rays of the

setting sun. Beyond the Ghāt edge, broken country slopes to a vast treeless expanse, undulating between great stretches of rock or boulder and poorly tilled patches of cultivation. South of the Deccan the well-watered fields of the Carnatic lead to the giant forests of Kanara, which are to be seen at their best near the magnificent Gersoppa Falls. Vistas of rolling hills clad with evergreen forest stretch everywhere to the limit of the horizon. Beyond the evergreen zone, dense patches of tall teak and feathery bamboo line the valleys of perennial streams, where clumps of screw-pine catch the broken lights that penetrate the leafy canopy. The scenery is of rare beauty at all seasons of the year, whether half hidden and half revealed in the driving mists of the monsoon, or pierced by the shafts of the hot-season sun in the mysterious silence of an April noon. Yet before all in picturesqueness are the coast tracts of the Konkan, where sparkling rollers break on soft white sand beneath overhanging palm and grey-green casuarina; red-rocked islets and promontories lie in the broad bosom of a light blue sea; the flaming leaf of the gold-mohur tree in hot-season foliage offers a beacon by day to guide the quaintly moulded native craft on their coastwise journeys; and in the background the long grey line of the eternal hills sends streamlet and broad river alike to mingle their floods with the depths of the Indian Ocean.

Mountains.

The following are the chief mountain ranges, which all have a general direction from north to south. In the north-west, on the right bank of the Indus, the Kīrthar mountains, a continuation of the great Sulaimān range, separate British India from the domains of the Khān of Kalāt. In Sind there are low ranges of sandhills, and in Cutch and Kāthiāwār several isolated peaks and cliffs, which form geologically a continuation of the Arāvalli mountains. Proceeding towards the south-east, an extensive mountain chain is met with, which may be regarded either as a southern spur of the Arāvallis or a northern prolongation of the Western Ghāts beyond the valleys of the Tāpti and Narbadā. These hills separate Gujarāt from the States of Central India, beginning in the neighbourhood of Mount Abu and stretching southwards down to the right bank of the Narbadā. South of the Tāpti the country becomes rugged and broken, with isolated masses of rock and projecting spurs, forming the watershed for the great rivers of the Deccan. This rugged region constitutes, strictly speaking, the northern extremity of the WESTERN GHĀTS, here called the Sahyādri Hills. That great range runs southward, parallel to the sea-

coast for upwards of 1,000 miles, with a general elevation of about 1,800 feet above the sea, though individual peaks rise to more than double that height. The western declivity is abrupt, and the low strip of land bordering the sea-shore is seldom more than 40 miles in width. The Ghāts do not often descend in one sheer precipice, but, as is usually the case with a trap formation, the descent is broken by a succession of terraces. The landward slope is gentle, also falling in terraces, the crest of the range being in many cases but slightly raised above the level of the central plateau of the Deccan. Apart from minor spurs of the Western Ghāts, only two ranges in the Presidency have a direction from east to west. The SĀTPURĀ range, from the neighbourhood of the fort of Asīrgarh to its termination in the east of Gujarāt, forms the watershed between the Tāpti and Narbadā rivers, separating Khāndesh from the territories of Indore, and attaining an elevation of over 5,000 feet. The SĀTMĀLA or Ajanta hills, which divide Khāndesh from the Nizām's Dominions on the south, are of less importance, being rather the northern slope of the plateau of the Deccan than a distinct hill range.

Rivers. The Bombay Presidency has no great rivers which it can call its own. The outlying province of Sind is penetrated throughout its entire length from north to south by the INDUS, whose overflowing waters are almost the sole means of distributing fertility through that parched region. Its season of flood begins in March and continues until September; the discharge of water, calculated at more than 40,000 cubic feet per second in December, is said to increase tenfold in August, the average depth of the river rising during the inundation from 9 to 24 feet, and the velocity of the current increasing from 3 to 7 miles an hour. The entire lower portion of the delta is torn and furrowed by old channels of the river, for the surface is a light sand easily swept away and re-deposited year by year. The plains of Northern Gujarāt are watered by a few small streams, the chief of which are the Sābarmatī and Mahī, both rising in the Mahī Kāntha hills and flowing southward into the head of the Gulf of Cambay. The NARBADĀ, in its westerly course to the sea from Central India, has but a short section within the limits of the Presidency. It separates the territory of Baroda from Rewā Kāntha, and, after passing the city of Broach, falls into the Gulf of Cambay by a noble estuary. For about a hundred miles from the sea it is navigable at all seasons by country boats, and during the rains by vessels of 50 tons burden. The TĀPTI, although a smaller river, has a

greater commercial importance. It flows through the whole length of Khāndesh and enters the sea a little above the city of Surat. Both these rivers run for the most part between high banks, and are of little use for irrigation. Passing southwards, the hill streams which rise in the Western Ghāts and flow west into the Arabian Sea are very numerous but of little importance. During the rains they become formidable torrents, but in the hot season they dwindle away and almost cease to flow. In the lowlands of the Konkan their annual floods have worn deep tidal creeks, which form valuable highways for traffic. In the extreme south of the Presidency, in the District of North Kanara, these westward-flowing streams become larger; one of them, the Sharāvatī, plunges downwards from the mountains in the celebrated Falls of GERSOPPA. On the eastern side of the Ghāts are the head-waters of both the GODĀVARI and KISTNA (Krishna) rivers, the former of which rises near Nāsik and the latter near Mahābaleshwar. Both of these, after collecting the waters of many tributary streams, some of considerable size, leave the Presidency in a south-easterly direction, crossing the entire plain of the Deccan on their way to the Bay of Bengal.

Bays and lakes.

The most peculiar natural feature in the Presidency is the RANN OF CUTCH. Authorities have not yet decided whether it is an arm of the sea from which the waters have receded, or an inland lake whose seaward barrier has been swept away by some natural convulsion. It covers an estimated area of 9,000 square miles, forming the western boundary of Gujarāt; but when flooded during the rainy season, it unites the two gulfs of Cutch and Cambay, and converts the peninsula of Cutch into an island. In the dry season the soil is impregnated with salt, the surface in some places being moist and marshy, and in others strewn with gravel and shingle like a dry river-bed or sea-beach. At this time the Rann is frequented by numerous herds of antelope, the 'black buck' of sportsmen. Large tracts of marshy land are to be found in Sind, caused by changes in the course of the Indus. The MANCHHAR LAKE, on the right bank of the river, near the town of Sehwān, is swollen during the annual season of inundation to an area of about 160 square miles; and a large portion of the newly formed delta has not yet been fully reclaimed from the antagonistic forces of the river and the sea. Along the coast of the Konkan the low-lying lands on the borders of the salt-water creeks are liable to be overflowed at high tide. Several artificial sheets of water may, from their size, be dignified with the

title of lakes; of these the chief are the Tānsa lake, constructed to provide Bombay City with water, and the Gokāk lake in Belgaum. The former has an area of about 3,400, and the latter of 4,000 acres. Another sheet of water, the Kharakvāsla tank, intended to supply the city of Poona, and also to irrigate the neighbouring fields, covers an area of 3,500 acres.

Islands.

There are numerous small islands scattered along the coast, few of which are inhabited or of any importance. The noteworthy exceptions are CUTCH, SALSETTE, and BOMBAY. These are separated from the mainland by creeks of salt desert or tidal mud. An island of historic interest, as being one of the first places on the coast known to the ancients, is ANJIDIV, situated a few miles from the port of Kārwār, and since 1505 a Portuguese possession.

Harbours and lighthouses.

Though the Presidency coast-line contains many estuaries forming fair-season ports for vessels engaged in the coasting trade, Bombay, Karāchi, and Kārwār alone have harbours sufficiently landlocked to protect shipping during the prevalence of the south-west monsoon. The coast-line is regular and unbroken, save by the Gulfs of Cambay and Cutch, between which lies the peninsula of Kāthiāwār. There are 69 lighthouses in the Presidency, of which the chief are Manora Point at Karāchi, visible for 20 miles; the Prongs and Khānderi lights at Bombay, visible for 18; and the Oyster Rock light at Kārwār, visible for 20 miles. The Aden light can be seen for 20 miles.

Geology.

From a geological point of view, the rocks forming the Bombay Presidency can be classified in the following divisions: (1) A group of very ancient rocks, partly crystalline and partly sedimentary. These include, firstly, a variety of granitic and gneissose rocks which occur in the southern Districts (Dhārwār, Kanara, Belgaum), where they are closely compressed into complicated folds, together with some highly metamorphosed stratified rocks called the 'Dhārwār series' with which they are intimately associated; they are also found in parts of Rewā Kāntha and the Pānch Mahāls. Secondly, younger stratified deposits known under various local names, such as Kalādgi, Bhīma, Chāmpāner. These have usually undergone a very moderate degree of disturbance and metamorphism as compared with the highly altered older strata upon which they rest unconformably; they are completely unfossiliferous, and are almost entirely older than the Cambrian. (2) An immense accumulation of volcanic rocks, principally basaltic lavas, known as the 'Deccan trap.' This is the most important

geological formation in the Bombay Presidency, covering almost entirely the region included between the 16th and 22nd parallels of latitude, together with the greater part of the Kāthiāwār peninsula and a large portion of Cutch. (3) A series of fossiliferous marine and fluviatile strata extending in age from middle Jurassic to upper Miocene or lowest Pliocene. They are best developed in the northern part of the Presidency, and include strata belonging to, firstly, the middle oolite (Cutch); secondly, the lowest Cretaceous (Umia beds of Cutch and Kāthiāwār); thirdly, the upper Cretaceous (Lameta and Bagh series of the lower Narbadā region); fourthly, the Eocene (Nummulitic limestones and associated rocks of Surat, Cutch, and Sind); fifthly, Oligocene and Miocene (Upper Nāri, Gaj, and Manchhars of Sind, Cutch, and Kāthiāwār). (4) Ossiferous gravels and clays of the Tāpti and Godāvari valleys, with fossil remains of extinct mammalia of upper Pliocene or lower Pleistocene age. (5) Recent accumulations forming the plains of Sind and Gujarāt and the Rann of Cutch.

The geological literature of Bombay is very extensive. Some of the most important works have been published in the *Memoirs of the Geological Survey of India*, among which may be mentioned the geological descriptions of Sind by Dr. W. T. Blanford (vol. xvii), of Cutch by A. B. Wynne (vol. ix), of Kāthiāwār by F. Fedden (vol. xxi), of the Deccan trap and the Narbadā and Tāpti valleys by Dr. Blanford (vol. vi), and of the South Marāthā Country by R. B. Foote (vol. xii). The Dhārwār series, the chief auriferous series in South India, has also been described by R. B. Foote in vols. xxi and xxii of the *Records of the Geological Survey*. Most of the fossils from the Presidency have been described in various volumes of the *Palaeontologia Indica*.

The Presidency can be distributed into the following botanical provinces: Sind, Gujarāt (including Kāthiāwār), Khāndesh, Deccan, Southern Marāthā Country (including the greater part of Belgaum, Bijāpur, and Dhārwār Districts), Konkan, and Kanara. There are no absolute boundaries to these divisions, but each, in a certain degree, possesses some characteristic forms of vegetation. By taking the broadest possible view of the subject, the number of provinces may, however, be reduced to five, as Khāndesh can be included in the Deccan, and Kanara may be looked upon as a southern extension of the Konkan. Botany.

The flora of Sind, Gujarāt, Khāndesh, and the Deccan is comparatively poor: the commoner trees are those which have

been intentionally planted or preserved; the shrubs are often thorny and stunted; the herbaceous plants are mostly represented by weeds of cultivation, but the grasses are of extremely varied forms, and the pastures are luxuriant in the rainy season.

In the tracts of the Southern Marāthā Country, which correspond in configuration to the Deccan but differ in their geological composition, the flora is somewhat more varied; but it is in the Konkan and Kanara, with the adjoining Ghāts, that vegetation is richest in forms. The trees are often lofty; the shrubs are of many different types, frequently growing in impenetrable thickets; while the herbaceous vegetation is, on the whole, scantier than in the more open country above the Ghāts.

Of the plants of the Presidency, only the following orders (given in order of importance) contain more than fifty species each: *Leguminosae*, *Gramineae*, *Acanthaceae*, *Compositae*, *Euphorbiaceae*, *Cyperaceae*, *Convolvulaceae*, *Orchideae*, *Rubiaceae*, *Labiatae*, *Malvaceae*, and *Urticaceae*. There are probably only 2,500 species of flowering plants altogether, and many of these are confined to special tracts and localities, so that, taking into account the extent and diversity of the Presidency, the flora is poor.

The principal timber trees are: teak, found in all forests throughout the Presidency except in Sind; black-wood, of two varieties, *Dalbergia Sissoo* in Sind, and *D. latifolia* in the other parts of the Presidency; *D. ougeinensis* (*tiwas*), found in hill forests throughout the Presidency; *Pterocarpus Marsupium*, called *honne* in Kanara and *bibla* in the Northern Division; *Terminalia tomentosa*, known as *aịn* in Marāthī and as *sadara* in Gujarātī; ebony and *poon*, found only in the Southern Division; *babūl* (*Acacia arabica*), attaining to greatest size and excellence in Lower and Middle Sind, but found in all parts of the Presidency; *khair* (*Acacia Catechu*), valuable not only for timber and firewood, but also as yielding the extract known as cutch; *Nauclea cordifolia* (*heda*) and *N. parvifolia* (*kalam* in Marāthī, *yetgal* in Kanarese), common in the coast forests, less so inland; *nāna* or *nāndi*, and *bonda* or *bondāra*, two varieties of *Lagerstroemia*; *asana* (*Bidelia spinosa*); *anjan* (*Hardwickia binata*), found only in Khāndesh; *jāmba* (*Xylia dolabriformis*), a hard and durable wood, sometimes called iron-wood; and *bahān* (*Populus euphratica*), soft and of no great size, but the only timber tree which grows in any abundance in Upper Sind. Tamarisk (*Tamarix indica*), though

it never attains any size, deserves mention from the very extensive scale on which it is cut by the Forest department in Sind as fuel for steamers on the Indus. Sandal-wood is found in the forests of Kanara. The bamboo, though unknown in Sind, is widely spread throughout the forests of the Northern and Southern Divisions.

The forests also contain many trees which are valued on account of their fruits, nuts, or berries. Among these are the mango (*Mangifera indica*); the jack (*Artocarpus integrifolia*); the *ber* (*Zizyphus Jujuba*); the *bel* (*Aegle Marmelos*), a valuable remedy in dysentery; the *hirda* (*Terminalia Chebula*), which supplies the myrabolam of commerce; the *undi* (*Calophyllum inophyllum*), the seeds of which yield a dark-green oil; the *mahuā*-tree (*Bassia latifolia*), from the flowers of which spirit is distilled, while the seeds yield a large quantity of thick oil used for making soap in Kaira District, and are also exported; and the *karanj* (*Pongamia glabra*), whose beans give an oil used not only for burning, but also medicinally in cutaneous diseases.

The palms of the Bombay Presidency are the coco-nut (*Cocos nucifera*); the true date (*Phoenix dactylifera*), very abundant near Sukkur in Upper Sind; the bastard date (*Phoenix sylvestris*), found in the Konkan, Gujarāt, and the Deccan; the palmyra palm (*Borassus flabellifer*), common along the coast; the *bherali* (*Caryota urens*), a mountain palm found on the seaward slopes of the Western Ghāts; and the *supāri* or betel-nut palm (*Areca Catechu*). The fermented sap of the *tād* or palmyra palm is largely used as an intoxicating drink under the name of *tadi* (toddy). Similar drinks are prepared from the sap of the coco-nut and the bastard date palm, and pass by the same name, while the fermented sap of the *bherali* is known as *mādi*. Oil is largely extracted from the kernel of the coco-nut, and coir fibre from the outer husk. The leaves of the coco-nut and palmyra palms are much used in Bombay City and along the coast in the construction of temporary buildings and huts. Coarse matting is made from the leaves of the date palm.

The Presidency contains most of the fruit trees and vegetables common in India. The mangoes of Bombay have a special reputation, and good strawberries are grown at Mahābaleshwar. In Nāsik and Karāchi Districts grapes are successfully cultivated, and Ahmadnagar produces the Cape gooseberry in considerable quantities.

Among the wild animals peculiar to the Presidency may be Fauna.

mentioned the lion of Gujarāt, which zoologists are now disposed to regard as a local variety rather than a separate species; and the wild ass, frequenting the sandy deserts of Cutch and Upper Sind. Leopards are common, but the tiger has retreated before the advance of cultivation, and is now found only in remote jungles. The sloth bear (*Melursus ursinus*) is found wherever rocks, hills, and forests occur; and the bison (*Bos gaurus*) haunts the mountain glades of Kanara. Of deer, the *sāmbar* (*Cervus unicolor*) is found in the same localities as the bison, though in greater abundance, while the *nīlgai* (*Boselaphus tragocamelus*) and the antelope are numerous, especially in Gujarāt. *Chītal* (*Cervus axis*) and the barking-deer (*Cervulus muntjac*) are also common. Small game, such as snipe, quail, partridges, and wild ducks, can generally be obtained by the sportsman at the right season in most parts of the Presidency, even within easy reach of the suburbs of Bombay. In 1904 the total number of registered deaths throughout the Presidency caused by wild beasts was only 33, whereas venomous snakes killed 1,129 persons. On the coast and in the big rivers fish are found in abundance. The chief kinds of sea-fish are the pomfret, sole, mullet, stone-fish, and lady-fish, while the rivers contain mahseer, *maral*, and *palla*.

Climate, rainfall, and temperature.

The rainfall, with the exception of occasional thunderstorms, is confined to the five months between June and November, during which the south-west monsoon strikes the long line of the west coast, to be followed by heavy storms on its retirement in the latter part of this period. Sind is almost rainless, receiving 2 inches of rain in July and August, and less than 2 inches during the remaining ten months; and the temperature is, in consequence, subject to great fluctuations. During the cold months, from October to March, the thermometer falls below freezing-point at night, and the days are of agreeable freshness. In the hot months that follow, the dry heat is intense, reaching a maximum of 126° at Jacobābād. Gujarāt has a more ample rainfall of 20 to 30 inches, with a brisk cold season, and oppressive heat in the summer. The temperature falls on the burst of the south-west monsoon, but the air remains hot and sultry till the approach of the cold season in October. The Konkan tracts receive the full brunt of the monsoon's fury, and have a rainfall of 100 to 150 inches, almost entirely due to the south-west rain current. The air is heavily charged with moisture throughout the year; and the climate, except for a brief period during December, January,

and February, is oppressive to those who are not used to it, though the thermometer seldom rises above 96°. In contrast to the Konkan, the Deccan or Districts above the Ghāts receive a moderate rainfall of between 20 and 30 inches, starting with downpour and drizzle from the south-west from June to September, and ending with sharp heavy storms from the north-east in October. In March and April the thermometer readings are high, 108° to 110° being a not unusual maximum; but the air is dry and the heat less oppressive than on the coast. During the monsoon the climate is cool and pleasant, and the cold months, if short, are decidedly bracing. The Carnatic in its western portions enjoys a heavy rainfall, increasing rapidly from 50 to 200 inches as the edge of the Ghāts is approached. To the east, the plain country has a rainfall resembling that of the Deccan, though heavier and more certain. The cold season is agreeable, but of short duration. During the hot season the climate is tempered by westerly breezes from the sea, and extremes of heat are seldom reached. At the height of the south-west monsoon, floods are not uncommon. The rivers, suddenly filled by many hundreds of streams and hill-side torrents, rise rapidly in their beds, inundating the land on each side for a considerable distance.

The tables on the next page give average statistics of rainfall and temperature.

Many houses were destroyed in Cutch by an earthquake in 1819. Seismic disturbances have been registered from time to time at the Colāba Observatory; but no earthquakes perceptible otherwise than by scientific instruments have been recorded in the recent history of the Presidency. Cyclones and the accompanying floods have been numerous. The usual period for such occurrences is just before, or at the conclusion of, the south-west monsoon. In August, 1868, a severe storm caused floods on the Sābarmatī river, which rose many feet in a few hours, flooding Ahmadābād and destroying 10,000 houses. The total loss ascribed to this calamity was estimated at 158 lakhs. A similar flood in 1875 injured 4,000 houses. In 1872 the Pānjhra and Girnā rivers in Khāndesh District overflowed and caused great destruction of property. More than 5,000 families were rendered homeless, apart from the wild tribes, and the damage to crops and property was estimated at 160 lakhs. Considerable tracts in Kaira and Surat Districts have been flooded on numerous occasions. In 1883 continuous rain caused the Tāpti to rise steadily until

Earthquakes, cyclones, and floods.

Rainfall

Station.	Average rainfall (in inches) for twenty-five years ending with 1901 in												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total of year.
Jacobābād	0·25	0·29	0·17	0·15	0·17	0·08	1·12	1·12	0·11	...	0·14	0·16	3·76
Karāchi	0·61	0·34	0·17	0·22	0·01	0·65	3·24	1·63	0·44	...	0·06	0·13	7·50
Deesa	0·14	0·10	0·05	0·03	0·27	2·11	9·27	6·84	3·82	0·34	0·16	0·07	23·20
Bombay	0·13	0·04	0·02	0·07	0·62	20·36	25·48	14·34	11·02	2·25	0·45	0·06	74·84
Kārwār	0·08	0·02	...	0·54	3·44	37·58	36·84	23·88	12·09	7·11	1·86	0·11	123·55
Poona	0·05	0·04	0·04	0·64	1·31	4·79	6·99	3·54	4·87	4·18	1·00	0·17	27·62
Bijāpur	0·06	0·06	0·25	1·03	1·36	3·70	2·51	3·10	6·82	5·00	1·75	0·41	26·05
Belgaum	0·06	0·04	0·40	2·13	2·40	8·92	15·09	9·26	4·86	5·69	1·56	0·13	50·52

Temperature

Station.	Height in feet of Observatory above sea-level.	Average temperature (in degrees Fahrenheit) for twenty-five years ending with 1901 in							
		January.		May.		July.		November.	
		Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.
Jacobābād	186	58·1*	29·8†	94·7	33·1	96·2	23·9	69·1	35·8
Karāchi	30	65·7	22·1	85·6	14·6	85·9	10·1	75·0	25·7
Deesa	466	67·6	32·1	92·0	28·8	85·2	14·6	74·9	33·6
Bombay	37	75·1	14·5	85·8	9·9	81·2	6·9	80·3	13·5
Kārwār	44	76·1	21·0	84·8	10·1	77·5	11·0	78·6	17·9
Poona	1,840	70·4	31·3	85·6	27·2	76·7	11·5	73·0	26·8
Bijāpur †	1,946	72·8	26·8	87·6	26·1	78·8	15·9	73·8	24·7
Belgaum	2,539	70·6	26·1	80·6	25·2	71·5	8·9	71·9	21·1

NOTE.—The diurnal range is the average difference between the maximum and minimum temperatures of each day.
* The figures here are for twenty-four years. † These figures are for ten years only.

one-third of Surat city was inundated by water to a depth of 20 feet. The surrounding country was flooded, and more than 2 lakhs' worth of damage to crops and buildings was recorded.

The records of the Meteorological department contain particulars of many cyclones on the west coast. In recent years the most noteworthy of these were in 1889, 1896, and 1902, the first two during the monsoon, and the latter in May, when a severe storm travelling northwards struck Bombay, doing much damage to shipping in the harbour and produce lying ready for shipment in the docks.

History. Earliest period before 322 B.C.

In the earliest times of which we have any record the Aryans were already settled on the Indus and even knew of trade by sea. But the greater part of the west coast was peopled by Dravidian tribes, who lived in forts and villages under the rule of kings, carried on the ordinary arts of life, such as weaving, pottery, and working in metals, and worshipped spirits and demons of all degrees, besides a supreme deity known as *Ko* (king). An export trade to the Red Sea by way of East Africa sprang up as early as 1000 B.C., and with Babylon by way of the Persian Gulf not later than 750 B.C. By the latter route the Indian traders brought home the Brahmī alphabet, the parent of all modern Indian scripts, as well as the art of brick-making, and possibly the knowledge of the lunar mansions (*nakshatra*), the Babylonian weights (*manā*), and the legend of the Flood. The Persian conquest of the Indus valley (*c.* 510 B.C.) may have introduced the arts of sculpture and of coining money. Meanwhile, India south of the Vindhyas was being Aryanized in faith and partly in speech, not at first by conquest, but by peaceful settlements of Brāhmans along the west coast. For Western India the importance of Alexander's march down the Indus (325 B.C.) lay chiefly in the fact that it cleared the way for the huge empire of the Mauryās, which under Asoka (272–231 B.C.), who became an ardent Buddhist, included Kalinga and the whole west coast down to Mysore, as well as the Marāthās of the Deccan (Rastikas and Petenikas) and Berār. Western India was placed under the prince-governor of Ujjain. Missions spread Buddhism among the traders of the coast towns and the Western Deccan, which by this time was more or less completely Aryanized; and Jainism also seems to have first reached the South at this period. It was a time of peace and of active intercourse with foreign nations, especially with the Greek monarchy of the Seleucids. Asoka's empire broke up

The Mauryās, 321–184 B.C.

after his death, the western provinces falling to the prince of Ujjain.

Andhras or Sātavāhanas and Greeks, 200–100 B.C.

After the Mauryās came the Bactrian Greeks (180 B.C.), of whom Apollodotus and Menander (150 B.C.), a prince of Buddhist leanings, probably ruled in Sind and Kāthiāwār. Farther south the heritage of the Mauryās fell to the Andhras or Sātavāhanas of Paithan on the Godāvari, a Dravidian family whose power by 200 B.C. had reached Nāsik and the Western Ghāts. In the meantime a great migration of the nations of Central Asia brought a number of Scythians into Northern and Western India, where they came into collision with the Sātavāhanas, while the trade with Rome, which sprang up about A.D. 40, brought ever-growing wealth to the cities of the west coast. About 120 Ujjain and Gujarāt fell into the hands of a line of foreign Kshatrapas, which lasted till about 300. Their best-known ruler, Rudradāman (150), held the sea-board from the mouth of the Indus to the Damangangā, together with the inland country from Multān to Bhīlsa. The kingdom of his rivals, the Sātavāhanas, stretched across the Peninsula from sea to sea, and on the west from the Damangangā to Vanavāsi (Banavāsi) in Kanara, the chief towns being Dhanakataka (Dharnikotta) in the Kistna delta, Tagara (Ter) near Naldrug, and Paithan on the Godāvari. About 210 their power in the west seems to have died out, and that of the Kshatrapas took its place (*c.* 230–400). The country flourished so long as the two kingdoms were at peace. Brāhmans and Buddhists shared the royal bounty, and merchants vied with each other in excavating temples and monasteries on all the main roads to the coast. The Kshatrapas, foreigners as they were, were the first Indian dynasty to use classical Sanskrit in inscriptions, and Rudradāman himself was versed in all the learning of the Brāhmans, while the Sātavāhanas seem to have given much encouragement to Prākrit literature. After the fall of the Paithan dynasty (210) Broach monopolized the European trade, which was much encouraged by the Kshatrapas, who now seized and held Kalyān; but before long, through the fall of Palmyra (273) and the extinction of the main Kshatrapa line (*c.* 300), commerce fell into decay.

Foreign invaders, 100 B.C.–100 A.D.

Kshatrapas and Sātavāhanas, 100–300 A.D.

Guptas, Vallabhis, Chālukyas, Rāshtrakūtas, Gūjars, 300–700.

The next century and a half is a period of great obscurity. In Gujarāt a series of short-lived Kshatrapa dynasties followed each other till *c.* 390, when the country was conquered by the Guptas of MAGADHA, who held it, not without difficulty, till about 460; in the Deccan and Konkan we can dimly trace

a number of small kingdoms, some of them founded by northern tribes (Abhīras). In the latter half of the fifth century new Central Asian hordes, led by the White Huns, poured into India from the north-west, and spread over the whole country as far as the Narbadā. In Kāthiāwār the Vallabhis (*c.* 500–770) established themselves on the ruins of the Gupta power; and farther south an extensive, though short-lived, empire was formed by the Traikūtakas, who were either identical or closely connected with the Kalachuris of Tripuri near Jubbulpore. From 500 onwards the new foreign invaders quickly became Hinduized. The Brāhmanic sects began to prevail over Buddhism, and Persian and Arabian influences became more powerful than European. The Northern Konkan was ruled by the Mauryas of Purī near Bombay, while the coast farther south obeyed the Kadambas of Vanavāsi, and the Southern Deccan was the theatre of a struggle between the Chālukyas and the Rāshtrakūtas. About 600 Gujarāt was overshadowed by the power of a new and energetic race, the Gūjars, who had probably entered India with the White Huns (452), and who, besides more northerly settlements in the Punjab and Rājputāna, established themselves at Bhilmāl near Mount Abu. By 600 they had overrun north-eastern Kāthiāwār, received the submission of the Vallabhis, and set up a branch at Broach (585–740). They rapidly assimilated Indian culture, and were, in the opinion of certain writers, the forefathers of some of the most famous Rājput races. For a time, indeed, it seemed as though the empire of the Guptas would be revived by Harshavardhana of Kanauj (606–48); but the confusion that followed his death left the field again open for the Gūjar dynasty of Bhilmāl, whose fortunes henceforward determined the fate of Gujarāt.

Meanwhile (600) the Chālukyas had emerged victorious from their struggles with the Traikūtakas and the Rāshtrakūtas in the Deccan, and had absorbed the smaller kingdoms of the coast. In the seventh century, which was the time of their greatest prosperity, a senior branch of this dynasty ruled the Deccan and Konkan, with a northern offshoot at Navsāri, while a junior line reigned at Vengi in the Kistna delta. The Chālukyas themselves worshipped Vishnu and Siva; but Jainism flourished in the Southern Deccan, and great Buddhist establishments existed at Ellora, Ajanta, and elsewhere in the northern provinces. After the Arab conquest of Persia (640) foreign trade became extinct, and the strength of the Chāluk- Deccan, 600–750. The Chālukyas.

yan empire was wasted in endless wars of conquest with its southern neighbours.

Gujarāt and Deccan, 750–950. Gūjars and Rāshtrakūtas.

The eighth century saw the entrance of the Musalmāns into Indian politics (711) and the fall of the Western Chālukya dynasty (750). The Musalmāns raided Gujarāt and destroyed the famous city of Vallabhi (*c.* 770), but their permanent conquests were limited to Sind. The Chāvadas, a Rājput tribe, probably of Gūjar origin, took advantage of the confusion caused by the Muhammadan raids to found the first kingdom of Anhilvāda (746), with the countenance and aid of the Gūjars of Bhilmāl, whose sway in the course of the next fifty years covered all Rājputāna and Mālwā, threatened Bengal, and eventually shifted its centre to Kanauj. But the Gūjar empire soon showed a tendency to break up into separate states (Chauhāns of Ajmer, Paramāras of Dhār, Chāvadas of Anhilvāda, &c.). The Gujarāt branch seems to have encouraged literature and especially to have patronized the Jains. South of the Mahī also changes not less far reaching took place. The Rāshtrakūtas at last (*c.* 750) overthrew their old enemies the Chālukyas, whom they penned in Mysore, and set up a new kingdom with its capital at Mālkhed, 60 miles south-east of Sholāpur. This kingdom was not so extensive as the old, for it did not include the territory of Vengi; but it was strong enough to prevent any northern power securing a lodgement on the southern bank of the Narbadā. The balance of power between the Gūjars and the Rāshtrakūtas lasted for about two centuries (*c.* 750–950). Neither kingdom was strong enough to encroach to any large extent upon the territory of the other—a state of things to which the dissensions between the Rāshtrakūtas of the main line and a branch that ruled in Gujarāt may have contributed. The Rāshtrakūtas carried on a good deal of desultory frontier fighting and had to meet several attacks from the Chālukyas of the south; but after the reign of Govinda III (794–814) they do not seem to have attempted conquests on a large scale. They were Saivas in religion, but Amoghavarsha I (814–77) was a patron of Jain literature. The power and magnificence of the dynasty greatly impressed the Arabs, to whom the king was known as the Balharā (Vallabharājā). But the local chiefs with whom the Arabs came most in contact were the Silāhāras of Purī, Chaul, and Thāna, who were made governors of the Konkan in the reign of Amoghavarsha I. Another branch of the same family ruled the coast farther south (800–1008). The trade with the Persian Gulf revived,

and brought with it an influx of Pārsī refugees (775), who found a ready welcome at the hands of chiefs who honoured impartially Siva, Buddha, and Jina. But this revival of trade was attended with a great outburst of piracy, in which the daring sailors of western Kāthiāwār took a leading part. In 941 (961 ?) the kingdom of Anhilvāda was conquered by Mūlarājā Solanki, son of a Gūjar chief who probably ruled somewhere in Northern Rājputāna. A few years later (973) a revolution took place in the Deccan also, when Taila, who was connected in some way with the old Chālukya family, overthrew the Rāshtrakūtas and set up a new Chālukya kingdom, for whose capital Kalyāni in the Deccan was soon chosen. His follower Bārappa founded a subordinate dynasty in Southern Gujarāt, but farther south the Silāhāras still continued to rule the coast.

Gujarāt, 946–1143. Solanki kingdom of Anhilvāda.

In Gujarāt the direct descendants of Mūlarājā (the Solankis) reigned at Anhilvāda until 1143. In religion they were Saivas and showed a special attachment to the temple of Somnāth, which frequently brought them into collision with the Chudasamās of Girnār (*c.* 940–1125), who commanded the road to that holy place. The Chudasamās called in the aid of the chiefs of Cutch and Sind (probably the Sūmras), and were not finally subdued till 1113. The northern frontier of the Solanki kingdom was constantly threatened by the Chauhāns of Ajmer, who, however, never inflicted any serious defeat on the Anhilvāda kings. Wars with Mālwā were also frequent till about 1134, when Sidharājā defeated the Paramāras and occupied Ujjain. The relations of the Solankis with the Chālukyas of the Deccan were at first hostile, and some time after 1050 the former conquered Gujarāt south of the Mahī; but the later kings of Kalyāni appear to have lived on friendly terms with their northern neighbours. The famous sack of Somnāth by Mahmūd of Ghazni (1026) seemed to threaten the extinction of the Solanki kingdom, but produced no lasting effects, and the Anhilvāda chiefs were left free to patronize literature and to adorn their chief towns with beautiful buildings.

Deccan, 973–1156. Chālukyas of Kalyāni.

The Deccan remained from about 973 to 1155 in the hands of the Chālukyas of Kalyāni, who adopted on a large scale the system, begun by their Rāshtrakūta predecessors, of placing separate provinces under hereditary governors, a policy which eventually proved fatal to their power. They carried on a series of indecisive wars with the Cholas of Kānchi (Conjeeveram), and inflicted severe defeats on the Paramāras of Mālwā and the Kalachuris of Tripuri (near Jubbulpore),

but did not attempt any lasting conquest of those kingdoms. They encouraged trade and showed much favour to Musalmān settlers on the coast, and, like most Indian kings of this period, they surrounded themselves with poets and scholars and posed as patrons of literature. But the power of the great feudatories always tended to increase at the expense of the central government, while a rival arose in Mysore in the Hoysala line of Halebīd, which first became dangerous about 1120.

Gujarāt, 1143–1242. Decline of the Solankis.

Towards the middle of the twelfth century the throne of Anhilvāda passed to a collateral branch of Mūlarājā's line, but the change brought with it no alteration in policy beyond an increase in the influence of the Jains. Kāthiāwār and Mālwā were nominally provinces of Anhilvāda, but we still hear of wars against chiefs in open resistance to the Solanki arms. The Konkan was invaded about 1160, but without permanent results, while the Chauhāns of Ajmer continued to threaten the northern frontier. The far more serious danger of Muhammadan conquest was averted by the defeat of Muhammad bin Sām in 1178, which saved Gujarāt from serious molestation for more than a century. But the Solanki kingdom had in its hereditary feudatories the same source of weakness as the Chālukya empire of Kalyāni; and when the last scion of Mūlarājā's line died in 1242, all power had already passed to the Vāghela chiefs of Dholka.

Deccan, 1155–1212. Yādavas of Deogiri.

The same century that saw the decline of the Solankis (1143–1242) witnessed also a long and complicated struggle for the mastery of the Deccan. In 1155 Bijjala, a Kalachuri feudatory of the Chālukyas, set up as an independent ruler at Kalyāni, whence the Chālukyas fled; but the new dynasty was hardly founded when it was overthrown (1167) by a revolution in which Basava, the founder of the Lingāyat sect, is said to have been the leader. The Southern Deccan now fell into absolute confusion, and most of the great feudatories claimed independence, while the last of the Chālukyas and of the Kalachuris fought for the mastery, and the Hoysala king stood ready to destroy the victor. In the Northern Deccan, where there were fewer competitors, the feudatory Yādavas of Deogiri had been steadily enlarging their boundaries and strengthening their armies for the final struggle. The Hoysalas were the first to move. They destroyed the Kalachuris in 1184 and the Chālukyas in 1192, in which year they also defeated the Yādavas; and for a time it seemed as if they would succeed to the whole heritage of the Chālukyas. But after an interval

of struggle the Hoysalas were driven back into Mysore, and the Yādavas under Singhana remained masters of the Deccan (1212). The Konkan chiefs, however, maintained their independence for some time longer.

Muhammadan conquest of Gujarāt and the Deccan.

The Dholka princes, who about 1233 superseded the Solankis in Gujarāt, belonged to a younger branch of the royal house, but their power was only a feeble caricature of the greatness of their predecessors. Their kingdom shrank to a part of Northern Gujarāt and Eastern Kāthiāwār, and their wars were little more than cattle-lifting raids. They were obliged to submit to, and to conclude a treaty of alliance with, the Yādava kings of the Deccan. Still at this time commerce flourished, and merchants spent large sums in building temples, while court poets and panegyrists were not wanting. But the real weakness of the kingdom is evident from the ease with which the armies at Delhi, under Alā-ud-dīn's brother Alaf Khān, subdued it in a single campaign (1298). The Yādava kingdom was likewise short-lived. Its first task, the subjugation of the great feudatories, was completed in the Deccan about 1250, and in the Konkan some ten years later. It is notable that we now for the first time meet with Brāhman generals and Brāhman provincial governors, employed in preference to the hereditary local chiefs whose power had proved so dangerous. The Yādavas had no serious rivals on their frontiers, and we hear little of their foreign relations. Their own kingdom was peaceful and prosperous, in reaction from the troubles of the preceding century; the treasury was full; many temples were built; learning flourished; and a vernacular literature began to spring up. But these fair prospects were put an end to by an unforeseen enemy. Alā-ud-dīn Khiljī suddenly appeared before Deogiri with 8,000 men, swept off the treasures of king Rāmchandra, and exacted a promise of tribute (1294). After several revolts the last of the Yādavas was put to death in 1318, and the Deccan became a Muhammadan province.

Gujarāt, 1298–1572. Kings of Ahmadābād.

For nearly a century (1298–1392) governors were sent to Gujarāt by the Sultāns of Delhi; but their province included only the open country about Pātan, Cambay, Baroda, and Broach, and the lower Tāpti. This territory suffered from the turbulence of Mughal mercenaries, and from the hostility of the Hindu chiefs of Kāthiāwār and the eastern hills, who were only brought to temporary submission by the presence of Muhammad bin Tughlak (1347–50). The last governor, Zafar Khān, the son of a converted Tonk Rājput, was left more and more to himself owing to the increasing weakness of the central

power, and finally assumed the title of king in 1407. Owing chiefly to the unusual capacity of two of his descendants—Ahmad Shāh (1411–43), the founder of Ahmadābād, and Mahmūd Shāh Begara (1456–1511)—the kingdom flourished greatly down to 1526, and lingered on, despite the factious quarrels of its nobles, until the province was conquered by Akbar in 1572. At its best period the kingdom comprised Northern Gujarāt from Abu to the Narbadā; Kāthiāwār, which became a Musalmān province through the occupation of Diu (1402) and Girnār (1471) and the sack of Dwārka Bet (1473); the Tāpti valley as far east as Thalner; and the tract between the Ghāts and the sea from Surat to Bombay. Between these southern districts and those of the Bahmanis, with whom Gujarāt was usually at peace, lay the buffer States of Bāglān and Burhānpur, the latter of which became for a long time a Gujarāt dependency under the Fārūki chiefs of Thalner and Asīrgarh (1370–1599).

Deccan, 1318–1600. The Bahmani kingdom and its offshoots.

The Deccan was organized as a Muhammadan province by Muhammad bin Tughlak, who divided it into four districts for which he appointed Moslem chiefs and collectors, and brought down settlers of all classes from Delhi. It included Chaul, Dābhol, Deogiri, Kandhār, Bīdar, Gulbarga, and Raibāg, and for a time Warangal, which last, however, was soon retaken by the Hindus. The garrisons were commanded by Mughal and Afghān officers, who in 1347 were driven into revolt by the severity of the Sultān, and set up a separate kingdom under the rule of Hasan Gangū Bahmani, a low-born Afghān of Delhi. Henceforward, and until 1586, the Sultāns of Delhi were too busy in Northern India to intervene in the affairs of the Deccan. The Bahmani house did not die out until 1526, but it ceased to be of political account after 1482. It produced some active soldiers, but no really great ruler, and its prosperity was due partly to a succession of able ministers, partly to the absence of any rival of really equal energy. The centre of the Bahmani power was the open country of the Deccan from Daulatābād to Gulbarga. The frontier was advanced to Kaulās in 1351, to Golconda in 1373, and to Warangal in 1424, but did not reach the Bay of Bengal until 1472. South of Dābhol and the Kistna, the Konkan and Carnatic were for the most part held by petty Hindu chiefs who looked for aid to the Rājās of Vijayanagar, with whom the Bahmanis disputed the possession of the Raichūr Doāb and the fort of Bankāpur. The Moslems were on the whole successful in these wars and retained the Doāb, but their progress in the Ghāts and Konkan

was very slow and incomplete. They invaded the Konkan in 1429 and 1436 with only partial success, and in 1453 with disastrous failure, and did not effectively occupy Goa till 1470. Their power in the Konkan at no time extended beyond a few of the larger ports. The interior of their country seems to have enjoyed peace, but suffered from terrible famines in 1396–1407 and in 1472–3. The downfall of the dynasty was brought about by the bitter jealousy between the Deccani nobles and the foreign chiefs (Afghāns, Turks, Mughals, Persians, and Arabs) upon whom the Sultāns chiefly relied. At the end of the fifteenth century the Bahmani empire was divided into five separate kingdoms, the more northerly of which (Ahmadnagar and Berār) were founded by Deccani nobles, while the three southern States of Bijāpur, Bīdar, and Golconda were established by Turkī chiefs. About the same time (1490) there was a change of dynasty at Vijayanagar also, and the Portuguese profited by the troubles to gain a footing on the coast. The Nizām Shāhi house of Ahmadnagar was of Brāhman origin and freely employed its fellows in high civil offices. The Bijāpur kings, who descended from the Marāthā wife of their Osmānli founder, from about 1535 made Marāthī their official language, and took Brāhman clerks and Marāthā soldiers into their service. The Ahmadnagar kingdom included the port of Chaul, the valley of the Godāvari as far as Nānder, and the greater part of the present Nāsik, Ahmadnagar, Poona, and Sholāpur Districts. Sholāpur itself, together with Naldrug and Kalyāni, was usually held by Bijāpur, though the Ahmadnagar kings claimed it whenever they felt strong enough. The districts of Mudgal and Raichūr were a similar bone of contention between Bijāpur and Vijayanagar. The original partition of the Deccan had no elements of permanency, as the statesmen of the period were well aware; but the balance of power was preserved by constantly shifting alliances in which the Musalmān kings and the rulers of Vijayanagar took part, until the ravages committed by the Hindu troops in 1562 brought about a league between the Muhammadan powers which destroyed the Vijayanagar kingdom (1565). Ahmadnagar then proceeded to absorb Berār (1572), while Bijāpur set about conquering the Hindu districts south of the Kistna. During this period the Eastern Deccan was disturbed by perpetual warfare, and the Muhammadans were not strong enough at sea to protect their trade against the Portuguese. Although the Fārūki king of Khāndesh acknowledged Akbar's supremacy in 1572, the Mughal emperor did not actively intervene in the affairs of the Deccan until 1586,

when his troops unsuccessfully invaded Berār in support of a pretender to the throne of Ahmadnagar. In spite of this warning, the reckless factions of the Deccan did not compose their differences. In 1595 a new Mughal army besieged Ahmadnagar and compelled the cession of Berār; and in 1596 war broke out afresh and ended in the capture of Ahmadnagar and the imprisonment of the boy-king by the Mughals (1600). Khāndesh had become a Mughal province in the previous year (1599).

The Portuguese, 1498–1594.

In 1498 the Portuguese came to Calicut in search of 'spices and Christians,' their first acquisition in the Presidency being the island of ANJIDIV. Their crusading valour soon gave them a footing in the ports of East Africa and Malabar; and after defeating the Egyptian fleet at Diu in 1509, they became unquestioned masters of the Indian Ocean, where they were careful to allow no local navy to grow up and no merchantman to trade without their pass. The next step was to establish settlements on the coast, in which they were helped by the weakness of the country powers. They took Goa in 1510, Malacca in 1511, and Ormuz in 1515. Later, the decay of the kingdom of Gujarāt enabled them to occupy Chaul (1531), Bassein with its dependencies, including Bombay (1534), Diu (1535), and Damān (1559). But they soon became a corrupt and luxurious society, based upon slave labour and mixed marriages, and recruited by place-hunters and wastrels from home. The cruelties of the Inquisition (from 1560) alienated the natives, and the union of Portugal with Spain (1580) deprived the Indian settlements of their claim to be the first care of the home government. The Portuguese monopoly of the trade with Europe could henceforth last only so long as no European rival came upon the scene. On land, however, the Portuguese were strong enough to beat off all Musalmān attacks on Goa (1570) and Chaul (1570 and 1592–4).

Gujarāt under the Mughal empire. Marāthā incursions, 1572–1740.

By the end of the sixteenth century the Delhi empire included the whole of Sind, Khāndesh, and Gujarāt, with the exception of the Portuguese possessions of Diu, Damān, Bassein, and Bombay. The efficiency of the administration was, however, much weakened by frequent transfers of officers, and by the practice, which soon grew up, of allowing the great nobles to remain at court and administer their provinces by deputy. The land tax, which was fixed at the cash equivalent of one-third of the produce, was the chief head of revenue and was assessed upon a system devised by Rājā Todar Mal. Akbar abolished many minor imposts and transit duties, and

prohibited *satī* and the enslavement of prisoners of war; but it is doubtful whether the control of the central power was at any time strong enough to enforce the emperor's benevolent measures in distant provinces. The emperors down to Aurangzeb employed Hindus and Musalmāns indifferently in positions of trust, and did not levy the poll-tax on infidels (*jazia*) from Hindus. In Gujarāt, down to the death of Aurangzeb (1707), the Mughal viceroys were on the whole successful in maintaining order and prosperity, in spite of the turbulence of the Kolīs and Rājputs in the north, of the famines of 1596, 1631, 1681, 1684, and 1697–8, and of the Deccani attacks on Surat, which was sacked once by Malik Ambar (1610) and twice by Sivajī (1664 and 1670). Almost throughout the Mughal period the province yielded a revenue of nearly two crores of rupees, and a large foreign trade was carried on at the ports of Cambay, Broach, and Surat. The decline of Mughal rule began with a Marāthā raid across the Narbadā in 1705. From 1711 these invasions became annual, and the Marāthās established themselves successfully at Songad (1719), Chāmpāner (1723), and Baroda (1734). The beginning of the end came during the governorship of Sarbuland Khān (1723–30), who farmed out the revenues and admitted the Marāthā claims to *chauth* and *sardeshmukhi*. Henceforward, although the Delhi court continued to appoint viceroys until 1748, absolute anarchy reigned in the province, which was ravaged impartially by the leaders of the Peshwā's and the Gaikwār's armies, by the Rājās of Jodhpur, by the agents of the Nizām-ul-mulk, and by such local Musalmān chiefs as the Bābis, who established themselves at Junāgarh (1738) and Bālāsinor (1761), the Jhāloris, who settled at Pālanpur (1755), and Momin Khān, who set up the State of Cambay (1748). Famines in 1719, 1732, and 1747 added to the misery of the people. In 1737 the Gaikwār was admitted to a full half-share in the revenues of the province, and occupied Ahmadābād jointly with the viceroy's troops (1738). Broach from 1731 to 1752 was held by a deputy of the Nizām, who had to give up a share of its customs to the Gaikwār. Surat suffered chiefly from the violence of rival candidates for the governorship.

Deccan, 1600–1740. Rise of the Marāthās.

By 1600 the Mughals held Khāndesh and the forts of Ahmadnagar and Nāsik, but had by no means subdued the open country or crushed the Deccani Musalmāns, who established a new capital at Kharki (Aurangābād) close to their old centre of Daulatābād. In 1610 Malik Ambar recovered Ahmadnagar and nearly the whole of the old Nizām Shāhi

dominions, and sacked Surat. Almost until his death (1626) he remained master of the Deccan, where he introduced the revenue system that has made his name a household word. The Mughals did not really regain their position until 1630, or finally crush the Nizām Shāhis and capture Daulatābād until 1633. These successes brought them into collision with the Bijāpur government, which had hitherto followed a temporizing policy. The result of the war was a peace very favourable to Bijāpur, which gained the territory between the Bhīma and the Nīra, as well as the Northern Konkan up to the Bassein river (1636). This peace lasted for twenty years (till 1656), during which the Mughals pacified the Northern Deccan and introduced Todar Mal's revenue system, while the Bijāpur government turned its attention to the conquest of the petty chiefs of the Carnatic. At this time the Hindus began to play a leading part in the Deccan. For a hundred years the Marāthās had been learning warfare, and the Brāhmans the art of government, in the service of the Bijāpur Sultāns. At the same time there had been a notable revival of Hindu religious feeling under the guidance of Vaishnava preachers (Eknāth and Tukārām). The Mughals had destroyed Ahmadnagar and were threatening Bijāpur. The old order was clearly falling to pieces and the Marāthās only wanted a leader. They found one in Sivajī Bhonsla. Sivajī was born (1627) and brought up in the country which passed from Ahmadnagar to Bijāpur under the treaty of 1636, and which was under the immediate government of his father Shāhjī, who had been one of the most prominent of the Bijāpur generals. Though a younger son, he was initiated very early into the management of the family inheritance, owing to the absence of his father and brothers in the Carnatic. He was trained from the first as the Hindu ruler of a Hindu state, though this ideal by no means excluded politic submission to a foreign superior who did not interfere in home affairs. As his power increased, Sivajī modelled his government more and more on the old Hindu kingship of the law books. The complete attainment of his ideal was notified to the world by his coronation in 1674. This restoration of the old law under a Hindu king took such a hold upon the Marāthā imagination that Sivajī's system was enabled to survive the death of its founder. Sivajī built up his kingdom at the expense of Bijāpur. He began by subduing the new provinces in the Northern Konkan and between the Bhīma and the Nīra (1646–8). He next conquered Jāvli in the old Bijāpur dominions (1655) and overran the Konkan from Janjīra to Goa

(1659–62), after which he built forts on the coast and began to create a navy. The Bijāpur government, distracted by wars abroad and factions at home, failed to recover its lost provinces, and was compelled by an alliance between Sivajī and the Mughals to buy him off with a promise of tribute (1668). On the death of Sultān Alī Adil Shāh of Bijāpur in 1673, Sivajī renewed the war and conquered Panhāla, with the open country to the east of it, Sātāra, Phonda near Goa, and the ports of Kārwār and Ankola (1672–6). He next allied himself with Golconda and invaded the Bijāpur Carnatic (1676–87). The Bijāpur government, now hard pressed by the Mughals, bought peace and alliance by ceding Kopal and Bellary and resigning the overlordship of the Carnatic (1679). In his two wars with the Mughals (1662–5, 1670–80), which interfered with his designs on Bijāpur, Sivajī was not the aggressor. Aurangzeb on his part desired to weaken the Deccani powers by fomenting their quarrels, but not to crush them until he could take the field in person. Hence the real fight for the mastery of the Deccan did not take place in Sivajī's lifetime, and his raids upon Surat, Ahmadnagar, Aurangābād, Khāndesh, and Berār were only diversions. Sivajī carefully strengthened the forts in his territories, and collected his revenues direct through government officers. His army, both horse and foot, received regular pay, and had to account for their plunder. The Mughals had besieged Bijāpur in 1657 and again in 1666, when its Sultān bought peace by the cession of Sholāpur and the adjoining districts (1668). In 1675 a fresh Mughal invasion ended in a truce and an alliance, which was renewed in 1678. But Aurangzeb pressed for harder terms, and the Bijāpur government turned for help to Sivajī, who created a diversion by plundering the Mughal Deccan (1679). After Sivajī's death (1680) the Mughal party again gained the upper hand in Bijāpur and tried to recover some of the districts ceded to the Marāthās. Aurangzeb judged that the time had now come for completing the conquest of the Deccan, which he entered in person with a vast army (1684). For a time success seemed to follow his arms. He took the capitals and occupied the territory of both Bijāpur (1686) and Golconda (1687), and captured and executed Sivajī's weak son Sambhājī (1689). But he had now destroyed the only organized Musalmān power of the Deccan, and was to enter upon a war of race and religion in which the Marāthās were no longer paralysed by the incapacity of Sambhājī. The country was overrun by the disbanded soldiery of the fallen kingdoms, and the resulting anarchy gave scope to

the guerrilla tactics of the Marāthās. Aurangzeb could neither trust his officers nor do everything himself, and corruption and disorganization increased from year to year until the whole imperial machine was out of gear. In the first stage of the war, Rājā Rām, the Marāthā regent, held his court at Gingee in the Carnatic (1690–8), which was besieged by the Mughals, while the Marāthā horse overran the Deccan in every direction. In the next period (1699–1705) Aurangzeb besieged the Marāthā forts, while the Marāthā horsemen ranged farther afield into Mālwā and Gujarāt. About 1705 the tide definitely turned. The Marāthās recaptured their forts, and Aurangzeb retired to Ahmadnagar, where he died (1707). The new emperor withdrew the remnant of the great army of the Deccan, but created a division among his enemies by releasing Sivajī's grandson Shāhū, who had been brought up at the Mughal court (1707). Shāhū established himself at Sātāra, while a younger branch of Sivajī's line set up a separate kingdom at Kolhāpur (1710). After a period of anarchy Shāhū, aided by the talents of Bālājī Vishvanāth, the founder of the Peshwā dynasty, restored order in his own territory, was acknowledged (1713) by Angria, the commander of the fleet, who ruled the Konkan from Kolāba southwards, and obtained (1720) from the emperor the cession of the country south of the Bhīma as far east as Pandharpur, as well as the right to levy *chauth* (one-fourth) and *sardeshmukhi* (one-tenth) from the Mughal Deccan, the Carnatic, Tanjore, Trichinopoly, and Mysore. These levies gave the Marāthās a pretext for interfering wherever they chose. The collections were so arranged as to intermingle the interests of the several military chiefs, and make them dependent on their Brāhman clerks. The increasing power of the Peshwā and the employment of the Marāthā forces in distant enterprises brought about the decay of Sivajī's constitution, which was suited only for the management of home affairs. As the authority of the Rājā grew less, the kingdom became a confederacy of leaders whose chief bond of union was a joint interest in their plunder. The year 1724 was a turning-point in Deccan history, marked by the definite adoption by Shāhū, under the influence of Bālājī's son, the Peshwā Bājī Rao, of the policy of destroying the Mughal empire, in preference to consolidating his own dominions, and by the arrival in the Deccan of Nizām-ul-mulk, the founder of the present Hyderābād dynasty, nominally as the emperor's deputy but really as an independent ruler. The Nizām desired to free the *Sūbah* of Hyderābād from the Marāthā claims,

but was completely defeated (1728). His ally, the Rājā of Kolhāpur, was bought off by the cession of the country between the Vārna and Tungabhadra (1730); and his tool, Trimbak Rao Dābhāde, was defeated and slain (1731). The Peshwā now (1732–6) turned his attention to Mālwā and advanced to the gates of Delhi. In 1737 the Nizām was induced by the emperor to invade Mālwā, where he was defeated; but in the Deccan his troops met the Marāthās on equal terms and peace was restored, to the vexation of Bājī Rao, who died in 1740. Meanwhile, the ruin of the Mughal empire was completed by the invasion of Nādir Shāh (1739).

Gujarāt and the Deccan, 1740–74.

The Marāthās from this time to the end of the eighteenth century remained the dominant power in Western India, and during the first thirty-four years of the period (1740–74) they had only local rivals to deal with. Gujarāt was parcelled out among a number of local chiefs, who carried on ceaseless petty wars which the Marāthās had no wish to suppress so long as they could secure their share of the plunder of the province. The Peshwā's seizure of half the Gaikwār's share in 1751 only added another claimant of blackmail. After the battle of Pānīpat the local Musalmāns tried, but failed, to drive out the Gaikwār (1761). The last chance of a strong native government growing up was, however, ruined by the disputed succession at Baroda in 1768. The internal troubles at Surat lasted until the castle was occupied by the British in 1759. This event gave them claims on Broach, which had been independent since 1752, but was taken by a British force in 1772. In 1740 the new Peshwā, Bālājī, had first to strengthen his own position in the Deccan. He bought off his most dangerous rival, Raghujī Bhonsla of Nāgpur, by giving him a free hand in Bengal (1744). He obtained from Shāhū on his deathbed a deed empowering him to govern the kingdom (1749); he secured the succession of a puppet Rājā of doubtful legitimacy (1749), won over the leading chiefs by liberal grants, made Poona the capital of the confederacy (1750), and baffled by treachery the rising of Dāmājī Gaikwār (1751). The old Nizām had died in 1748. Bālājī took part in the disputes among his sons, and, in spite of the aid given by the French to their nominee, extorted a cession of all the country west of Berār, between the Tāpti and the Godāvari (1752). Further quarrels among the Nizām's sons enabled the Peshwā to occupy Ahmadnagar. This led to a war, at the end of which (1760) the Marāthās obtained possession of the *Sūbah* of Bijāpur, which they henceforth retained, as well

as of other lands which the Mughals regained later (1763 and 1766). In 1743 the Peshwā had become governor of Mālwā; in 1754 his troops had decided the succession to the Mughal empire; and in 1755 they levied *chauth* in Hindustān and at Arcot. But their military power was broken when at its height by Ahmad Shāh Durrāni at the bloody battle of Pānīpat (1761), which was followed by the death of Bālājī. This crushing blow enabled the Nizām to recover some of his lost provinces (1763), gave Haidar Alī time to strengthen himself in Mysore (1764), and freed Delhi from Marāthā domination for nine years (1761–70). The Bhonsla of Berār showed a tendency to break off from the confederacy, and Bālājī's brother Raghuba began that course which for twenty years made him the stormy petrel of Marāthā politics. None of the country powers, however, was strong enough to overthrow the Marāthā kingdom. The able young Peshwā, Mādhu Rao I (1761–72), checkmated his turbulent uncle, played off the Nizām against the Bhonsla, repeatedly defeated Haidar Alī, and re-established Marāthā influence at Delhi (1770–2). He also found time to bring his Deccan provinces under a system of government which, however rude, was vigorous, popular, and comparatively honest, and under which he realized a revenue of 280 lakhs.

Marāthās and British, 1774–82.

The first collision between the Marāthās and the British took place in 1774, when civil war broke out between Raghuba and the ministry which governed in the name of the child Peshwā, Mādhu Rao II. Hearing of a Portuguese expedition for the recovery of Salsette, the Bombay Government seized that island (1774), and agreed to aid Raghuba in return for the cession of Salsette, Bassein, and certain districts in Gujarāt (1775). The Governor-General, however, concluded with the Poona ministry the Treaty of Purandhar (1776), under which Raghuba was to be pensioned off and Salsette and Broach were to be left in the hands of the British. But the wording of the treaty gave rise to new disputes; and the fear of a French invasion led the Bombay Government to send Raghuba towards Poona with an army, which, however, was compelled to surrender at Wadgaon to Sindhia and Nāna Farnavīs, the two leading members of the Peshwā's government (1779). The balance was restored by the march from the Jumna to Surat of a Bengal army, which met with considerable success in Gujarāt and took Bassein (1780). A league between the Peshwā, the Nizām, and Haidar Alī (whose aid the Marāthās obtained by confirming his conquests in Dhārwār) led the British to drop the scheme of setting up Raghuba at Poona, and Mālwā

and Madras became the chief theatres of war. Sindhia was the first to come to terms (1781), and some months later Nāna Farnavīs also agreed to the Treaty of Sālbai (1782), under which Salsette remained with the British, who handed over Broach to Sindhia. The Gaikwār was protected against the Peshwā, and Raghuba was pensioned off and died soon after (1784).

Break-up of the Marāthā confederacy. Extension of British power, 1782–1803.

For twenty years (1782–1803) the British and Marāthā Governments remained at peace. It was during this period that the Marāthā confederacy began to break up. The Gaikwār was detached by his acceptance of British protection (1782); Sindhia had become accustomed to act alone in Hindustān, and took no part in the Mysore War (1785–92); while the Berār chiefs were encouraged by the British to follow a policy of their own. In Gujarāt there was little improvement in the government during this period, though, in spite of disputes in the Gaikwār's family and intrigues at the Poona court, a semblance of order was preserved by British influence from 1782 to 1799, when the Gaikwār took Ahmadābād and imprisoned the Peshwā's agent. Further disturbances then took place, which were put down by a British force (1803). In 1799 the Peshwā farmed his rights to the Gaikwār, who entered into subsidiary alliance with the British. Negotiations followed between the British, the Peshwā, and the Gaikwār, which ended in the cession to the first named of certain districts and rights in Gujarāt. The British Government had annexed Surat in 1800, on the death of the Nawāb, whose family were pensioned off, and had conquered Broach from Sindhia in the war of 1803.

After the peace with the English (1782) the first care of Nāna Farnavīs was to regain, by an alliance with the Nizām, the territory with which the Peshwā had bought the aid of Mysore in 1779. This object was attained in 1787, but Tipū renewed the war, and by attacking Travancore drove the British to join the alliance against him (1790). In 1792 he made peace at the cost of half his dominions, of which the Peshwā obtained the portion north of the Wardhā river. The accession of Raghuba's son, Bājī Rao, to the Peshwāship (1796) caused the fall of Nāna Farnavīs and the ruin of the Marāthā power. Through his efforts to secure the throne and to shake off first Nāna Farnavīs and then Sindhia, Bājī Rao incurred the distrust of all parties and plunged the Deccan into civil wars in which the Rājās of Sātāra and Kolhāpur took part. He intrigued both with the British and with Tipū, but took no

part in the last Mysore War (1799), at the end of which he found himself hemmed in between a British protectorate (Hyderābād) on the east and British Districts on the south. The Marquis Wellesley now invited him to enter the system of subsidiary alliances. In fear of Holkar, who had seized Poona in revenge for the murder of his brother, Bājī Rao signed the Treaty of Bassein (1802). The British restored him to Poona, defeated Sindhia and the Berār chief, who had taken up arms on hearing of the Treaty of Bassein, at Assaye, at Argaon, and in Hindustān, and forced them to sue for peace (1803). The Bombay Government took but a subordinate part in these proceedings, as from 1774 their foreign policy had been controlled by the Supreme Government at Calcutta, and in the Deccan campaign of 1803 the chief part was taken by Madras troops. The Presidency then included only Salsette, the harbour islands (from 1774), Surat (from 1800), and Bānkot (from 1756), the affairs of Northern Gujarāt and the Deccan being the business of the Governor-General's Agents at Baroda and Poona respectively.

1803-27. Organization of the Bombay Presidency and fall of the Peshwā.

It was between the years 1803 and 1827 that the framework of the Bombay Presidency took its present shape. The first Districts to be organized were those of Gujarāt, which were taken over by the Bombay Government in 1805, and enlarged in 1818. The Gaikwār was already under British protection, and the Peshwā's rights were acquired partly by treaty and partly by conquest. The Districts were organized on the Bengal model, and the change from native rule was rather in men than in measures. The first steps towards the settlement of Kāthiāwār and Mahī Kāntha were taken between 1807 and 1820. After Bājī Rao's restoration the Deccan suffered severely from famine; and robbery, oppression, and corruption were rampant. After long vacillation, Bājī Rao, the last of the Peshwās, attempted to shake off British control, but was defeated, captured, and pensioned off (1817-8). A kingdom was created for the Rājā of Sātāra, the heir of Sivajī, out of part of the Peshwā's dominions, and two *parganas* were given to Kolhāpur; the rest was placed under a British Commissioner (1819). The settlement of the Presidency was completed by Mountstuart Elphinstone (Governor in 1819-27), whose aim was to govern on the best native lines, avoiding changes until the people should be fitted for them by education. He pacified the Deccan, set up the Sadr Court, codified the laws, and opened schools. The grosser abuses of Bājī Rao's days were stopped, and the peasantry were contented

Mountstuart Elphinstone.

and orderly, though the Brāhmans and the soldiery felt the loss of their former chances of distinction and plunder.

1827-52. Enlargement of the Presidency.

Elphinstone's governorship was followed by a period of retrenchment and slower progress, marked chiefly by the enlargement of the Presidency through the lapse of Native States, the addition of ADEN (1839) and SIND (1847), and the lease of the Pānch Mahāls from Sindhia (1853). Something was done for education, irrigation, public health, and railways, and in 1843-5 a somewhat serious rising in Kolhāpur was put down. The government had the defects of its qualities. Taxation was lighter than before, but more strictly exacted. Criminal trials were more regular, but punishment was less certain. Now that order reigned, more land was tilled and trade was safer, but for that very reason there followed a great and general fall in prices, which increased the pressure of the land tax. In the Deccan a premature attempt at a new settlement led to great distress. The new rates were at once reduced, and after twelve years of inquiry the principles which are still the basis of the Bombay land revenue system were formulated in 1847. The operations of the new survey generally resulted in a reduction of assessment, and there ensued a period of great agricultural prosperity. The survey brought to light many cases of lands held rent-free without authority, and the Inām Commission was appointed to inquire into all such claims (1852).

Lord Elphinstone, 1853-60.

Under Lord Elphinstone (1853-60), though the landholders had been alarmed by the proceedings of the Inām Commission and by the use of the doctrine of 'lapse,' the Presidency passed through the crisis of the Mutiny without any general rising, for the local rebellions in Gujarāt, among the Bhīls, and in the Southern Marāthā Country lacked concert and cohesion, and the outbreaks among the troops at Karāchi, Ahmadābād, and Kolhāpur were quickly put down. The most dangerous rebel, Tāntiā Topī, was headed off from Gujarāt and hunted down in 1859. After the Mutiny progress was much more rapid, especially as regards education, railways, and the cotton industry.

Sir Bartle Frere, 1862-7.

Under Sir Bartle Frere (1862-7) agricultural prosperity reached its highest point, owing to the enormous demand for Indian cotton in Europe during the American Civil War (1861-5). The wealth thus poured into the country led to an extraordinary epidemic of speculation, known as the 'Share Mania' (1864-5), which ended in a serious commercial crisis and the failure of the Bank of Bombay (1866). But the

peasantry on the whole gained more than they lost, and in the long run the trade of Bombay was not seriously injured. At this time the main lines of railway were opened, and the Presidency was covered with a network of roads.

Deccan famine, 1876-9.

In 1868 the monsoon failed and the condition of the Deccan began to cause anxiety, owing to the indebtedness of the peasantry. Their relations with their creditors led to riots and outrages (1873), which were inquired into by a special commission; but before any action was taken on its report, the monsoon of 1876 failed and the great famine of 1876-8 set in. The monsoon of 1877 was again irregular, and was followed by epidemic fever and a plague of rats (1878), so that relief measures were not discontinued until 1879. The direct result of the famine was the construction of new railways and irrigation works in the Deccan, and the formation of Government forests on a large scale for the purpose of improving the rainfall and securing the supply of wood. A measure was also passed to protect agriculturists against the grosser forms of fraud on the part of money-lenders (1879).

There followed a brief period of prosperity in which much was done for education and local self-government. About 1890 a series of bad seasons began. Hindu feeling was much excited by discussions on the Age of Consent Bill, and by the preaching of the Cow Protection Societies, which embittered the relations between Hindus and Muhammadans to such an extent as to cause riots in Bombay City and many other places (1893-4).

Famine, plague, and disaffection, 1896-1902.

Worse, however, was to follow. The rains of 1895 were below the average, and the failure of those of 1896 caused famine throughout the Deccan in 1896-7. After one poor and one fair season there followed the great famine of 1899-1902, which desolated Gujarāt and the Northern and Western Deccan, and was accompanied by a virulent outbreak of cholera. Plague appeared in Bombay City in August, 1896, and has since spread by land and sea to every part of the Presidency. The original plague measures caused great alarm and discontent, and were violently opposed in 1898 at Sinnar and Bombay. When the most stringent and costly efforts failed to stamp out the disease, it became clear that a permanent plague policy could not be based on them. From October, 1898, therefore, more use was made of native volunteer agency, the restrictions on travelling were relaxed, and the discretional relief fund was started to help the poorer sufferers. The inquiries of the Plague Commission (1898-9) resulted in still

further relaxations, which came into force under the orders of the Government of India from July, 1900. The people are now generally accustomed both to the plague and to the existing plague measures, and accept both with resignation. Down to the end of March, 1904, over one million deaths had been reported in the Presidency as due to plague. Bitter feelings against Government found vent in the native press, in an attempted strike against the payment of revenue (1896–7), and in disturbances arising out of forest grievances in Thāna (1896), and culminated in the murder of the chairman of the Poona plague committee and another officer by a band of Brāhman fanatics in June, 1897. Trade and industry suffered very severely during these years.

Archaeology.

Except a few dolmens and implements of the stone age, there are no remains in Western India older than the inscriptions of Asoka (250 B.C.) at JUNĀGARH and SOPĀRA. The oldest buildings were of wood, but were copied in hundreds of Buddhist caves dug out of the trap cliffs on the main routes from the Deccan to the coast. The best-known groups are at BHĀJA (200 B.C.), BEDSA (100 B.C.), KĀRLI (50 B.C.), JUNNAR (A.D. 100), NĀSIK (100 B.C.–A.D. 200), and KĀNHERI (A.D. 100–500). In each group is at least one pillared hall with a barrel roof and a relic shrine (*chaitya*) and a number of square chambers (*vihāra*), out of which open cells for monks and travellers. There are no separate relic shrines (*stūpas*), rails, or pillars of archaeological importance. Both Jains and Hindus imitated the Buddhist caves; but, except the Hindu caves at ELEPHANTA and BĀDĀMI (seventh to eighth century), their best work is found in the Nizām's dominions. All temples in Western India have a cell which contains the idol, with a tower above it (*vimāna*) and a pillared porch or hall (*mandapa*) in front. The oldest structural temples (seventh and eighth century) are to be found at AIVALLI, PATTADKAL, and BĀDĀMI in Bijāpur District. One of these resembles a *chaitya* cave, while others show the terraced tower of the Dravidian or the four-sided spire of the Indo-Aryan style. The latter is the true local style of the Deccan, where hundreds of temples, which are now ascribed in the Marāthā districts to Hemādpant and in the Kanarese country to Jakhanāchārya, were built between 1000 and 1300. The term Hemādpanti, which is applied to old temples, reservoirs, and wells in Khāndesh and the Deccan, is derived from the name of the minister of Rāmchandra (1271), the Yadāva ruler of Deogiri, who is supposed to have introduced some change in architectural style. But

the word has lost the special meaning which it once possessed, and is loosely applied to any old stone building dating from the period mentioned. This was the great age of temple-building in Gujarāt also, where the Jain style with its domed porches and rectangular courtyards grew up at Girnār and Shetriya. Ambarnāth is the best known, and Gondesvar near Sinnar the most perfect, example of the Indo-Aryan style. To the same period belongs the secular architecture of Jhinjhūvāda and Dabhoi, and a number of large wells and tanks in Gujarāt and the Deccan. The earliest Musalmān work of note is the Jāma Masjid at CAMBAY (1325), built from the spoils of Jain temples. During the best period (1411-1511) of the Gujarāt Sultāns, AHMADĀBĀD, MAHMŪDĀBĀD, and CHĀMPĀNER were adorned with many beautiful mosques, tombs, and palaces of Moslem design worked out by Hindu artists. In the Deccan the most notable Muhammadan remains are the tombs, mosques, and palaces erected at Bijāpur between 1557 and 1657. Since the fourteenth century the Hindus have built little of note except some forts, such as those constructed or repaired by Sivajī.

The history and archaeology of SIND are dealt with in the article on that Commissionership.

Population. The Census of 1901 showed the Bombay Presidency to contain 331 towns, 40,694 villages, and 5,004,095 houses, with a population of 25,468,209. Of these, 18,515,587 were in British territory, 6,908,648 in Native States, and 43,974 in the outlying settlement of Aden. Density. The density for the Presidency as a whole is 135 persons per square mile. Sind has a population of 3,210,910, with a density of 68; the Northern Division 3,513,532, density 256; the Central Division 5,944,447, density 160; and the Southern Division 5,070,692, density 203. Bombay City has a population of 776,006[1], equal to 35,273 persons per square mile. The Native States belong to four main groups—Gujarāt, population 4,361,666, density 94; Konkan, 350,684, density 225; Deccan, 373,779, density 78; Carnatic, 1,623,206, density 234. Khairpur in Sind has a population of 199,313 and a density of 33. In British territory the density of population varies from 449 (Kaira District) to 27 (Thar and Pārkar); in the Native States, from 319 (Kolhāpur) to 20 (Khāndesh Agency). Bombay City has a density nearly double that of Madras City, exceeding 500 to the acre in its most populous sections.

Towns and villages. The Presidency as a whole contains 11 towns of more than 50,000 inhabitants, and 313 of between 5,000 and 50,000.

[1] The population in 1906 was 977,822, according to a special census.

Villages of between 500 and 5,000 (including a few classed as towns in the Census) number 12,951, and villages of less than 500 inhabitants, 27,747.

Less than one-fifth of the population (19 per cent.) are to be found in towns of 5,000 and over. The percentage of the urban population has increased from 17 to 19 in the ten years since 1891; but in the face of the opposing influences of plague and famine, it is difficult to assign any definite significance to this increase. Except in the Konkan, where the houses are often widely scattered, the majority of the village population are crowded together on limited sites. Famine tends to drive villagers to centres of trade in search of employment, while plague acts as a deterrent on those who would otherwise resort to infected centres. Since the first plague epidemic in 1896, there has been a noticeable movement from town and village sites to the fields in the vicinity. The six most populous towns in British territory are BOMBAY CITY (776,006), AHMADĀBĀD (185,889), POONA (153,320), SURAT (119,306), KARĀCHI (116,663), and SHOLĀPUR (75,288). Further details of the population by District and State are given in Table I on pp. 133-4.

Growth of population.

An estimate of the population, prepared in 1854, gave a total of 15,578,992. In 1872 the first decennial Census showed that the actual number was 23,099,332. In 1881, in spite of the severe famine which occurred in 1877, the total reached 23,432,431, and this had again increased in 1891 to 26,960,421.

The decrease of population since 1891 by reason of famine and plague amounts to about 1½ millions, and has affected every District in the Presidency proper except Dhārwār and Ratnāgiri, which show an increase of 6 per cent. The Mahī Kāntha and Khāndesh Agencies have lost 38 and 43 per cent. of their population. Sind alone shows an increase of over 11 per cent., which is due to immigration as well as to natural growth. The brunt of the loss was experienced by the Native States and Gujarāt, which suffered most severely from the famine of 1899-1900. The mortality caused by famine and plague between 1891 and 1901 is roughly estimated at 3,000,000, of which one-third occurred in British territory and two-thirds in the Native States.

Migration.

The Presidency possesses an immigrant population of 800,000, the most noteworthy immigration being into Sind, where the bringing of fresh land under cultivation draws many cultivators from Baluchistān and the Punjab. There are now more Baloch in Sind than in the whole of Baluchistān. A

large number of labourers from Kolāba and Ratnāgiri Districts and from the Ghāt villages of Ahmadnagar, Poona, and Sātāra are found in Bombay City, where they are employed in the docks, or in the many factories and cotton-mills. It is remarkable that Bombay draws labourers even from the United Provinces, 36,000 immigrants from that area having been enumerated in 1901. On the other hand, the Census showed a total of 600,000 emigrants from the Bombay Presidency in other Provinces and States (excluding Baroda), so that streams of migration to and from the Presidency very nearly neutralize each other. These emigrants are chiefly found in Hyderābād State, Central India, and Berār. There is some emigration from the coast of Kāthiāwār to South Africa.

Age.

The record of ages in an Indian Census is notoriously untrustworthy, owing to the widespread ignorance of correct ages. In 1901 the population of the Presidency (excluding Aden) was 25,424,235, including 3,024,460 children under five years of age. The age distribution for each sex shows a preponderance of females in the periods 0–10 and over 40.

Age.	1881.		1891.		1901.	
	Males.	Females.	Males.	Females.	Males.	Females.
0–10	2,726	2,815	2,853	2,983	2,562	2,669
10–15	1,236	1,039	1,063	886	1,326	1,148
15–25	1,626	1,676	1,645	1,688	1,662	1,699
25–40	2,482	2,400	2,439	2,355	2,482	2,408
40 and over	1,930	2,070	2,000	2,088	1,968	2,076

The only interesting conclusion to be drawn from the age statistics recorded in 1901 is that, in Districts severely affected by famine, the proportion of the population in the age periods 0–5 and 60 and over is markedly less than elsewhere, an indication that the greatest sufferers in the famine period were young children and old people. The mean age of the population is 27, and is highest (29·4) among the Pārsīs owing to the steady decrease in the birth-rate of this community.

Vital statistics. Diseases.

The registration of births and deaths is compulsory in Bombay City, and is enforced more or less imperfectly under by-laws in most other municipal towns. In rural areas the village officers are held responsible for omissions and do their work with fair accuracy, except in Sind. The record of deaths is usually better than that of births. In a normal year the proportion of deaths to births is as 3 to 4; but since 1896 plague and famine have caused a large increase in the mortality, and have also affected the birth-rate. Of late years Bombay City has had

the highest death-rate (66 per 1,000) owing to plague, and the lowest birth-rate (14) owing to the small proportion of women and to the immigrant nature of its population. The highest birth-rate occurs in Khāndesh, and the lowest death-rates in Sind (16 to 22), where registration is defective, and in Ratnāgiri (25). The figures for 1900 in the table given below for British Districts show very clearly the effects of famine:—

Year.	Population under registration.	Ratio of registered births per 1,000.	Ratio of registered deaths per 1,000.	Deaths per 1,000 from			
				Cholera.	Small-pox.	Fever.	Bowel complaints.
1881	16,454,414	27·9	23·2	1·0	0·0	16·6	1·8
1891	18,857,044	36·3	27·3	0·9	0·1	19·6	2·0
1900*	,,	26·9	70·1	8·7	0·5	28·9	11·6
1901	18,515,587	25·2	37·1	0·7	0·3	15·8	3·3
1902	,,	34·2	39·0	...	0·2	14·7	3·2
1903	,,	31·2	43·9	0·1	0·2	14·1	3·0

* Famine year.

Cholera is prevalent in the hot season in years of short rainfall, and fever on the Ghāts and in tracts liable to flooding in the autumn and winter. Small-pox is held in check by vaccination. Plague broke out in Bombay City in August, 1896, and has spread to every District, causing a large number of deaths in each succeeding year except 1900. The total plague mortality in 1903 was 15 per 1,000, Belgaum, Dhārwār, Sholāpur, Ahmadnagar, Sātāra, Kaira, and Bijāpur suffering most. The deaths returned as from fever probably include many due to plague. The present policy is to provide hospitals for the sick and camps for the healthy, and to offer inoculation to those who desire it; but compulsion is avoided as far as possible.

Sex.

The proportion of sexes is vitiated to some extent by failure to enter females at the Census enumerations. The general proportion of females recorded in 1901 is 938 to 1,000 males in the British Districts. In Sind the proportion of women is very low. An excess of females over males is particularly noticeable among the low castes and wild tribes. Infanticide formerly prevailed among the Rājputs and Kunbīs of Gujarāt, but is believed to be no longer practised. The cause of this barbarous practice was the difficulty of securing bridegrooms from the sections of these castes with whom custom prescribed that intermarriage should take place.

Civil condition.

Statistics of civil condition are shown in the table on the next page.

According to the results of the Census of 1901, males in the

age period 10–15 show 85 per cent. still unmarried, but females only 50 per cent., in the Bombay Presidency including Native States. Females married in the age period 0–10 are more than three times as numerous as males. This is due to the very early age at which Hindu parents are accustomed to marry their female children. Among Hindus polygamy, though allowed, is rare, and divorce and widow marriage are marks of low status.

	1891.			1901.		
	Persons.	Males.	Females.	Persons.	Males.	Females.
Unmarried	10,753,459	6,536,214	4,217,245	10,334,421	6,261,568	4,072,853
Married .	13,385,644	6,675,545	6,710,099	11,974,989	5,972,759	6,002,230
Widowed .	2,758,003	660,854	2,097,149	3,114,825	831,555	2,283,270
Civil condition not returned .	19,236	10,579	8,657	...	...	...
Total	26,916,342	13,883,192	13,033,150	25,424,235	13,065,882	12,358,353

The proportion of widowed females to 1,000 widowed males is very high in Ratnāgiri (5,862), Sātāra (4,005), Kanara (3,924), and Kolāba (3,794). The plague epidemic in Bombay City, to which the male population of these Districts emigrate annually, seems to have caused the death of the husbands.

Language. The table below gives the language statistics for 1891 and 1901, excluding Aden :—

	Persons.	
	1891.	1901.
Marāthī	10,550,848	10,338,262
Gujarātī	8,633,332	7,140,613
Kanarese	3,068,453	3,097,325
Sindī	2,564,845	2,934,711
Hindī	1,194,112	1,124,171
Bhīl dialects	125,496	119,946
Others	779,256	669,207
Total	26,916,342	25,424,235

In the north, Sindī is the mother-tongue of all save a small minority, who for the most part speak either Mārwārī, Baluchī, or Gujarātī. South of Sind, Cutchī or Kachhī, now recognized as a form of Gujarātī, is spoken in Cutch. Gujarātī and Western Hindī are the principal languages in the five Districts of Gujarāt, the former merging into the dialects of primitive races where the province approaches the hills on the borders of Rāj-

putāna. Thāna and the Central Division are the home of Marāthī, different forms of which are spoken above and below the Ghāts. In the wilder parts of Khāndesh the hill tribes express themselves in dialects that resemble either Gujarātī or Marāthī according to their distance from places where these languages are in use. The Southern Division is divided between Kanarese and Marāthī, the former slightly ahead of the latter numerically. Marāthī is most common on the coast portions. Kanarese extends as far north as the southern part of Sholāpur District and is spoken by an appreciable number in the south of Sātāra. The Native States resemble the adjacent British Districts. Arabic and Somālī are the chief languages in Aden and Perim.

The Linguistic Survey of India has now advanced sufficiently to enable the languages and dialects of the Presidency to be classified on a scientific basis. It is probable that the completion of the survey will lead to the elimination of many dialects entered in the provisional lists framed during its progress. Meanwhile the *Census Report* for 1901 gives the numerical results of this preliminary classification. The following figures show the number in every 10,000 of the population who speak each of the four main languages (including kindred dialects) of the Presidency:—

Marāthī . . .	4,066	Kanarese . . .	1,218
Gujarātī . . .	2,809	Sindī . . .	1,154

Thus more than 90 per cent. of the population use a language or dialect included in these four. The only other languages of any importance are Western Hindī, Rājasthānī, Bhīl, Telugu, and Baluchī, of which all but Hindī and Bhīl are the languages of immigrants, such as merchants and bankers from Mārwār, or cultivators and landowners from Baluchistān. Western Hindī for the most part covers the tongue affected by the Musalmān population outside Sind, and includes the dialect known as Hindustāni.

It should perhaps be added that in this brief description Konkanī has been treated as a dialect of Marāthī, in accordance with the classification adopted in the Linguistic Survey. The decision is contested by many, who would derive Konkanī direct from the Prākrit and claim for it an antiquity exceeding that of Marāthī as a spoken language. The point is one for experts to decide, though it may be remarked that modern Konkanī is certainly permeated with corrupt forms of words found in a purer state in Marāthī, and is also to no little extent

dependent on words borrowed from Dravidian languages. Konkanī is spoken, as the name implies, in the Konkan, including the Konkan Ghāt Mātha or 'spurs of the Ghāts.' Unlike Marāthī, Gujarātī, and Kanarese, it has practically no literature except that written by Roman Catholics of Goa.

Tribes and castes. The Bombay Presidency intersects many of the social strata deposited by early invasions of India, and contains within its limits a variety of castes and tribes hardly equalled by any of the other great Provinces.

The natural divisions of the Presidency, distinguished by special influences on the development of caste and tribe, are five in number: Sind, Gujarāt, the Deccan, the Konkan, and the Carnatic. To Sind and its predominant Musalmān population reference is made below. Gujarāt has remained for the most part true to Hinduism, though petty Muhammadan kingdoms, as well as the supremacy of the Mughals of Delhi, have left their influence in many parts of the province—an influence to be traced in the formation of certain castes of converts, such as the Momna Kunbīs and Molesalams, looking to Islām for their religion and to Hinduism for their social structure. The former numerous political subdivisions of the province, which was for centuries split into rival Hindu kingdoms, display the effects of political boundaries on the evolution of caste divisions. The large caste groups designated comprehensively by the terms Brāhman and Vānī exhibit in Gujarāt a minuteness of subdivision elsewhere unrivalled; and the fact that many of these smaller groups bear the same name—e. g. Agarvāl, Harsola, Kapol, Khadayata, Khedavāl, Mewāda, Nāgar, Osvāl, and Srimāli—lends support to the inference that a common cause of caste fusion in the past is to be traced to the influence of political boundaries.

In marked contrast to Gujarāt with its amplitude of caste divisions, the Deccan contains a comparatively homogeneous population. Of the total inhabitants of the Deccan Districts 30 per cent. are Marāthās, between whom intermarriage is permissible, provided that there is comparative equality of social position, while of the 6 per cent. of the remainder who are Brāhmans, only 13 local divisions are to be found to compare with the 170 of Gujarāt. The causes which have led in the past to the crystallization of small fragments of castes farther north have evidently been inoperative in the Deccan.

The coast-line of the Konkan, or submontane tracts, possesses a special feature in the large number of Christians, for the most part Roman Catholic, which its population contains,

and exhibits the singular spectacle of the maintenance of caste distinctions within the fold of an essentially casteless religion. The sixteenth century witnessed, in the halcyon days of Portuguese dominion, the forcible conversion of many local castes, of which the unconverted fragments remain to add to the diversity of social divisions, largely due to the arrival of numerous immigrants by sea.

The Carnatic, or Southern Marāthā Country, is the seat of Lingāyatism, a Hindu reforming movement of the twelfth century. Social divisions among the Lingāyats, who form the majority of the population in this portion of the Presidency, would seem to be based on both religion and function, according to the stage in the history of the reformation at which the convert caste accepted the new social system that it evolved.

In the Ghāt tracts of the Deccan and Khāndesh, where the broken ground and thin soil scarcely permit remunerative cultivation, Bhīl and Kolī tribes eke out a precarious existence as hunters and collectors of forest produce. They represent the nearest approach to the aboriginal inhabitants of the country.

The terms 'caste' and 'tribe' are commonly used without any clear perception of the precise significance of either; nor is it easy to arrive at a satisfactory definition which is not too greatly at variance with their common or colloquial meaning. It has been aptly said that 'caste' is the largest group based on common occupation, and 'tribe' the largest group based on common descent; but in practice the former, at least, of these definitions proves somewhat too restricted. Castes may be found which are based on religion and descent, such as the Lingāyats or Marāthās of the Bombay Presidency, while the premier caste of all, the Brāhmans, seems at the present day to be identifiable more by social precedence involving the right to perform certain ceremonies than by any common form of occupation.

The main castes and tribes, which in most instances include numerous endogamous subdivisions, number over 500; but of these only a small number exceed 100,000. In the whole Presidency (excluding Sind) these are, in order of numerical importance:—

1. Marāthās.
2. Kunbīs (other than Marāthā Kunbīs).
3. Kolīs.
4. Lingāyats.
5. Dhers, Mahārs, and Holias.
6. Brāhmans.
7. Vānīs.
8. Dhangars, Kurabas, and Bharvads.
9. Bhīls.
10. Rājputs.
11. Mochīs and Chamārs.
12. Mālīs.
13. Māngs.
14. Kumbhārs.

15. Sutārs.
16. Agrīs.
17. Sonārs.
18. Hajjāms and Nhāvīs.
19. Berads.
20. Bhandāris.
21. Vārlīs.
22. Darzīs.
23. Telis and Ghānchīs.
24. Thākurs.
25. Lohārs.
26. Vanjāris.
27. Rabāris.
28. Ahīrs.

Marāthās. The Marāthās consist of 1,900,000 Kunbīs, 350,000 Konkanis, and 1,400,000 Marāthās not otherwise specified. The term Marāthā is in some respects so loosely applied that it is difficult to determine its precise significance. It is variously used to describe members of several castes living in MAHĀRĀSHTRA, those whose mother-tongue is Marāthī, and, more correctly perhaps, to designate the descendants of Sivajī's warriors, including the present Marāthā Kunbī and the below-Ghāt Marāthā, who were the backbone of the Peshwā's confederacy. It is the common impression at the present day that the Marāthās properly so called are divided into two groups which do not intermarry, the Kunbī or agriculturist being the inferior, and the warrior, landowner, or high-class Marāthā claiming a superior origin. The latter indeed profess to be of Rājput descent, to consist of ninety-six clans or families, and to be entitled to the dignity of Kshattriya. They support their claims to ascendancy in the social scale by favouring infant marriage, forbidding the marriage of widows, and wearing the sacred thread. The Kunbī, on the other hand, does not claim to be a Kshattriya, allows adult marriages and the marriage of widows, and wears no thread to indicate the twice-born status. But the dividing line is not of the nature of a permanent barrier, and can be passed by wealthy Kunbīs with ambition in proportion to their means. There is some historical evidence in support of the claims of certain Marāthā families to Rājput descent. This does not, however, throw light on the origin of the main portion of the caste, or tribe as it should correctly be styled. The indications of a former social organization of the tribe on a totemistic basis, which are now attracting attention, would seem to point to a mixed origin for the greater number of the present-day Marāthās.

Lingāyats. The Lingāyats, who number 1,422,000, are a religious community, resident in the southern portions of the Presidency. Having first come into prominence in the days of the religious reformer Basappa of Kalyāni, who lived in the twelfth century, they seem at first to have disregarded caste distinctions, and the social organization of the highest groups among the Lingāyats appears to be dependent on initiation to the present

day. Converts who joined at a later date are ranged in subdivisions based on profession, ordinarily that of their unregenerate days, while a third class of half Lingāyats, or low castes attached to the community for menial services, is recognized. One of the tests of a Lingāyat's claim so to describe himself is his right to the *ashtavarna* or 'eightfold sacrament.' Lingāyats of the present day are disposed to call themselves Hindus, and to apply to their subdivisions Manu's fourfold caste system.

Brāhmans number 1,053,000. Apart from the intellectual and social pre-eminence of the majority of those who have so described themselves, the special feature of the Brāhman caste is its very extensive system of subdivision into endogamous groups. There are over 200 such groups, each of which is again subdivided into sections the members of which must marry outside their limits. The origin of many of these endogamous divisions is believed to have been political; geographical names, such as Agarvāl, Khedavāl, and Sihori, of which there are many, are evidence in support of this assumption. The connecting link between the numerous divisions is that of common social predominance, combined with the right to perform certain ceremonies. Brāhmans.

Vānīs, numbering 1,054,250 (Hindus 976,128), are traders. The common bond is one of occupation. Ethnically they consist of groups of widely divergent origin. The endogamous subdivisions are almost as numerous as in the case of the Brāhmans. Ordinarily, the Vānī claims to rank as a Vaishya of Manu's fourfold classification scheme, and wears the sacred thread. Vānīs.

The remaining larger castes and tribes of the Presidency proper may be roughly classified as follows:—

- Wild or semi-civilized tribes—Kolīs, Bhīls, Berads, Vārlīs, Thākurs, Vanjāris, and Ahīrs.
- Shepherds and herdsmen—Dhangars, Kurabas, and Bharvads.
- Low caste and menials—Dhers, Mahārs and Holias, Mochīs and Chamārs, and Māngs.
- Artisans—Lohārs, Sutārs, Darzīs, Sonārs, Kumbhārs, Bhandāris, Mālīs, Hajjāms, and Nhāvīs.

These, with a few additional cultivating castes of the status of the Marāthā Kunbī—e.g. Agrīs, Kunbīs, and Rabānis—make up the greater portion (85 per cent.) of the population of the Presidency proper. Details of the strength of the remaining castes are given in the tables of the *Census Report* of 1901.

Sind tribes. The province of Sind, which since an early period of its history has been under the sway of invading Musalmān tribes, contains a population bearing little affinity to that of the remainder of the Presidency. Here the tribal units occupy the leading place, while castes are relegated to a comparatively subordinate position.

The Musalmān tribes of the province consist of ten main groups:—

Arab.	Makrānī.
Afghān or Pathān.	Mughal.
Baloch.	Shaikh.
Brāhui.	Sindī.
Jat.	Menial and slave tribes.

In the Census of 1901 an attempt was made to ascertain the numerical strength of the most important subdivisions of these groups. The attempt was only partially successful, owing to the tendency of members of such tribal subdivisions to return the name of the subdivision only when it is one of admitted local importance. In cases where the number of unspecified was very high, the record of subdivisional strength was omitted. In the case of the Baloch tribes the record of subdivisions seems to have been successfully accomplished. The Baloch number 542,000, divided into sixteen important tribes. The Rind—with its offshoots the Dombki, Khosa, Jamāli, Jakrāni, Lighāri—includes 270,000; the Chandias, 75,000; the Burdis, 68,000; and the border tribes, Marri and Bugti, 37,000. Among the first are the Tālpurs, historically of interest as the last independent rulers of Sind.

Arabs number 261,000 in the whole Presidency, of whom 130,000 described themselves as Saiyid. Sind alone contains 122,000. The term Saiyid, strictly interpreted, means 'lord' or 'chief,' and is applicable to the descendants of the Prophet's daughter, Bībī Fatima. Some caution, however, is necessary in accepting the returns of Saiyid, the title being popular among Musalmāns who are certainly not of Arab origin, and thus not, strictly speaking, entitled to use it. A similar error may result from classing as Arabs those Shaikhs who are ordinarily nothing more than converts to Islām, whereas a Shaikh should properly signify an Arab or descendant of the Prophet's relations. Shaikhs, who number 968,000, have therefore to be kept distinct from the Arabs. The Kalhora tribe, which preceded the Tālpurs as rulers of Sind, numbers more than 23,000. The Samo and Samro divisions of the Sindī tribes controlled the fortunes of the province for seven hundred

years previous to the middle of the sixteenth century. According to the recent Census these tribes are now represented by 124,000 Samros and 794,000 Samos. There are 48,000 Brāhuis, 27,000 Mughals, and 170,000 Pathāns.

The caste organization in Sind has undergone considerable modification, owing to contact with the alien and dominant social system of the Musalmān tribes referred to above. Brāhmans number only 14,000, or 0·4 per cent. of the population, compared with 4·7 per cent. in the rest of the Presidency. They are a degraded and illiterate caste. With their fall from the commanding position that they occupy under a Hindu régime, their influence on subordinate castes has diminished, until, in place of a general tendency on the part of the latter to imitate their social system and religious customs, it will be found that the premier Hindu caste in Sind, the Lohānas, wear the beard of the Musalmān conqueror, and permit themselves the luxury of animal food, provided that it has been slain after the orthodox fashion of Islām. Caste in Sind.

The chief Sind castes (numbering over 4,000) are:—

Bhīl.	Kolī.	Rājput.
Brāhman.	Kurmī.	Shikāri.
Chāran.	Mazhabi Sikh.	Sonār.
Dher or Mahār.	Odd.	Vānī.
Khitri.		

Statistics regarding religion for the whole Presidency in 1891 and 1901 are given below:— Religion.

Religion.	Persons.	
	1891.	1901.
Hindu	21,438,244	19,916,438
Animist	292,023	94,845
Jain	555,209	535,950
Musalmān	4,355,802	4,567,295
Pārsī	76,456	78,552
Christian	167,004	216,118
Native Christians	129,308	180,841
Europeans and Eurasians	37,696	35,277
Others	31,604	15,037
Total	26,916,342	25,424,235

About 78 per cent. of the population is Hindu, 18 per cent. Muhammadan, 2 per cent. Jain, and less than 1 per cent. Christian. No very strict line can be drawn between Animists and low-class Hindus. Hindus are for the most part either

Vaishnavas, Saivas, or Lingāyats, the first being most common in Gujarāt and the last in the south of the Presidency. The leading Vaishnava sects are those of Rāmānand (fourteenth century), Vallabhāchārya (1479–1531), Swāmi Nārāyan (1780–1830), and Kabīr (*c.* 1400).

Muhammadans are chiefly (97 per cent.) Sunnis, though the Shiah sect is also represented, especially in Bombay City, where the Ismailiya Shiahs or Khojas form an important community under the spiritual headship of the Agha Khān. They are supposed to represent the Assassins (Hashishin) of the crusading epoch. A new sect of Moslems known as the Ahmadiyyas and numbering over 10,000 was recorded in 1901. They are spiritual followers of the chief of Kādiān, who resides in the Punjab. Among Jains, the Svetāmbara, Digambara, and Dhundia sects are all represented, though the two former have numerical preponderance. The Pārsī community is divided between Bombay City and Surat. Sikhs are mainly found in Sind, and Jews in Bombay City and the coast Districts.

Christian missions. Twenty-six Protestant missionary bodies are to be found in the Presidency. The work of the Irish Presbyterian Mission and the Salvation Army in Gujarāt, of the American Marāthī Mission in the Deccan, and of the Basel German Mission in the Kanarese Districts deserve special mention. The stations of the S.P.G. and the C.M.S. are more generally distributed. Sind is included in the Anglican diocese of Lahore, and the rest of the Presidency in that of Bombay. The greater part of the Presidency is comprised in the Roman Catholic Archbishopric of Bombay, Poona being the seat of a Suffragan Bishop. Diu, Damān, Thāna, Kolāba, and parts of Bombay City are in the diocese of Damān. About one-sixth of the Christians are members of the Anglican communion, while one-half are Roman Catholics, many of these in Kanara and Thāna being descendants of converts made by the Portuguese. There are a few thousand Methodists and Presbyterians. In only five Districts does the Christian population exceed 10,000; these are Thāna, Kaira, Ahmadnagar, Poona, and Kanara. During the decade ending 1901 the Christian population increased by 30 per cent., mainly owing to conversions among the lower classes.

Occupations. The classification of the people in British Districts according to occupation shows 540,000 persons (or 3 per cent. of the total, in Government service; 11,000,000 (59 per cent.) engaged in agriculture; 320,000 (1·8 per cent.) in trade or commerce; 3,400,000 (19 per cent.) in manufactures and

arts; 590,000 (3 per cent.) in domestic occupations. These figures include dependants or persons supported by the occupation referred to in each case. The chief occupation is agriculture. The industrial section of the population in most of the rural Districts forms an insignificant section of the whole. The leading industrial Districts are Ahmadābād, Surat, Karāchi, and Shikārpur (now Sukkur), with 27, 35, 24, and 31 per cent. respectively of their population following industrial occupations.

Food is taken twice a day, between ten and twelve in the morning and eight and ten at night. For the morning meal a family in good circumstances will take rice of fine quality, split pulse boiled and seasoned with spices, cakes of wheaten flour spread with clarified butter, and some vegetables. At the evening meal there are cakes, milk boiled and mixed with sugar, vegetables, and pickles. It is rare for high-caste Hindus to eat animal food, though certain coast Brāhmans allow themselves fresh fish. The diet of the poorer classes is *jowār* or *bājra* bread, rice, split pulse, and vegetables. To this the lower castes add mutton and the flesh of fowls. The wild tribes eat the cheapest grains, such as *nāgli* and *kodra*, and partake freely of game. The unclean castes will eat anything, including the flesh of animals that have died a natural death. Musalmāns will eat only the flesh of animals killed with a prayer uttered at the time of cutting the throat. To Jains and Lingāyats of all ranks animal food is forbidden. Food.

People of the better class do not ordinarily touch liquor. The low castes and wild tribes are fond of toddy and cheap country spirits, though excess in drinking is rare. For stimulants and narcotics, opium and tobacco are widely used in moderation. The practice of tea-drinking, especially during railway journeys, has recently made great progress, and the habit of chewing betel-nut is almost universal with both sexes.

Fifty years ago a man's costume would have sufficed to serve as an indication of his caste. Nowadays even the types of *pagrīs* or turbans are losing their significance, and a distressing form of pork-pie cap, garnished with a border of coloured flowers, frequently tends to conceal the social status of the wearer. The heavy *pagrī* of the Marāthā, the high headdress of the Baniā, closely imitated by the head-covering of the Pārsī, the tightly bound turban of the Prabhu, and the double-peaked *pagrī* of the Bhātia can still, however, be readily identified. Most Hindus retain the fine cotton *dhotī* as a leg covering, though European influence is making itself Dress.

felt in the cut and texture of the coat that covers the upper part of the body, and the shirt and collar that are to be detected underneath. Musalmāns and Pārsīs wear trousers. The women are far more simple in their costume, being commonly content with a long robe or *sārī*, wound round the legs, and drawn across the breast to fall over the head and shoulder. To this a *cholī* or short tight bodice is frequently added, and in Gujarāt a petticoat. On the other hand, they delight in a great diversity of ornaments, from gems and necklets of solid gold, such as the richer classes wear, to the long brass anklets affected by the Bhīls and gipsy women, or the many pounds' weight of beads and berries that cover the breasts of the primitive cultivating and fishing classes. For the most part the bright-coloured *sārīs* of the women are still woven on the village loom.

Dwellings. People of almost all classes consider it a point of honour to have a house of their own. The character of the dwelling depends mainly on the materials available, the amount of the rainfall, and the means of the owner. Where timber is scarce, roughly made mud bricks are in use, and a foot or two of solid earth on a layer of rafters serves to protect the inmates from the great heat and the scanty rainfall. On the coast two-storeyed houses are common, with projecting roofs covered with country tiles. Here the poorer classes are content with wattle-and-daub huts, thatched with grass or dried palm-leaves. Houses above the Ghāts, within the zone of heavy rainfall, do not differ materially from those on the coast, though more wood is used in their construction when timber is plentiful. There is little luxury in the furnishing—a few strong wooden boxes, some tape-bound wooden cots, mattresses, cotton carpets, and the indispensable cooking-pots make an ample outfit for a well-to-do cultivator. The poorest classes are content with a mattress and a few earthen jars.

Amusements and festivals. Perhaps the most interesting characteristic of the people is their fondness for caste feasts and pilgrimages. Trade dinners are given either by the whole caste or by a member of it. Social dinners are given by a caste member, or are held as picnics, each supplying his own food. It is usual to celebrate a family event, such as the wife's first pregnancy, an investiture with the sacred thread, a marriage, or a death, by a feast given to all the members of the caste. Several days are spent in laying in supplies and collecting cooking-pots; all lend a willing hand in the preparations. The food is distributed by the host and his family to the men and boys, who feed

first, and after them the women are allowed to sit down to the feast. Among the more popular forms of sport are bullock-racing in light carriages, and ram-, cock-, or quail-fighting. Outdoor games for youths generally take the form of gymnastic exercises, including wrestling and putting a weight, though of recent years cricket has come greatly into fashion in all parts of the Presidency, and lawn-tennis is not unknown. Children are fond of kite-flying. Indoor games include chess, cards, and *songati* or Indian backgammon. Dramatic performances are popular, and some of the wild tribes are skilful in devising extempore plays for the entertainment of visitors. But the time to see the people of the country-side at their best is at the fair. At the oncoming of the hot season, when the harvest has been gathered in, the thoughts of the simple peasants will turn to one of the many shrines of the country-side. Some will shoulder the yellow flag of Sivajī, the *bhagva jhenda*, and trudge sturdily along the dusty Deccan roads to the tomb of Jnāneshvar at Alandi. Others in their best costume climb the steep slopes of Harischandragarh, to seek the tank and temples of the Gauli Rājā with shouts of 'Gyānoba Tukārām! Gyānoba Tukārām!' The sacred shrines of Gokarn will draw thousands from all parts of the Konkan and Carnatic to worship the mighty Siva, and join the merry crowd of bathers in the long rollers of the Indian Ocean. Endless bands of women-folk, packed twenty or thirty in a country cart, will rumble along for days to the rocky hill near Saundatti, making the country-side re-echo to the long-drawn cries of '*Ai Yellamma—oh!*' Happy in the anticipation of the harmless merry-making of these gatherings, the weary journey is a holiday picnic, in which good temper and stout hearts prevail, for a simple peasantry with simple pleasures, bearing with equanimity the scourge of famine and pestilence, and ever ready for the final pilgrimage when the greatest of all shrines shall lie open to them.

The joint family system is everywhere supreme. The Hindus of the Presidency generally have three names, the first their own, which is given to them on the twelfth day after birth, the second the father's, and the third a surname (the family designation). The surnames are in some cases professional appellatives, and in others are derived from places, e.g. Belgaumkar, Poonekar, which once signified that the bearer had special rights in such places, though the significance of such terms is rapidly disappearing with their increasing popularity. The Pārsīs have two names like the Hindus, to which they add such surnames as 'Contractor,' Nomenclature.

'Engineer,' &c., and at times the names of their grandfathers are used in the place of surnames. Among low-class Hindus the word *bin* or *walad* (both meaning 'son') is inserted between a man's name and his father's, which is coupled to it, while women add their husband's name, after the word *kom*, to their own.

Honorific suffixes are common. Thus, in Gujarāt, *rai*, *lāl*, *shetjī*; in the Deccan, *rao*, *naik*, *sāhib*; and in the Carnatic, *appa* or *gauda*—with corresponding terms for females, such as *bai* and *amma*. *Pant* and *shet* generally denote a Brāhman and a goldsmith. The common form of address is *Rājmānya Rājeshri*. In the case of persons of lower rank *Rājeshri* alone is used. *Tirthswarup* or *Chiranjīv* are added in addressing old or young relatives respectively. To parents *Tirthrup* is used, instead of *Tirthswarup*. Before the names of married women the word *Saubhāgyavati* is used, and in the case of widows, *Gangārup*. Learned Brāhmans are styled *Vedmurti*, and the rich *Shrimant*, while in the Carnatic it is usual to address persons of rank as *Swāmi* ('lord') or *Devaru* ('god').

Agriculture. General agricultural conditions.

The soils of the Presidency vary according to the natural divisions which have been already described. In Sind the soils are wholly alluvial; they vary in character from drift-sand to light clays, and are often strongly impregnated with salt. In Gujarāt they are classed in two main divisions, *kālī* and *gorādu*. The first is black cotton soil, of which extensive tracts are found in Broach and Surat. It is supposed to be the result of an alluvium brought down by the Tāpti and Narbadā rivers, and corresponds to the *regar* of the Central Provinces. *Gorādu* soils are characterized by immense depth, varying from the drift-sands of Ahmadābād to the rich loam of Kaira. They are entirely alluvial.

Characteristic of the Deccan is the black soil formed from the weathering of the trap rock, of which the broad wheat, cotton, and *jowār* lands of Khāndesh, Nāsik, Ahmadnagar, Sholāpur, Bijāpur, and Dhārwār are formed. Near the hills the soil is lighter-coloured and less rich. In the valleys of the south-west the reddish-brown laterite is terraced into rice lands, and the beds of the streams grow rice crops during the hot season. The bottom soils are clay loams of great natural fertility. These form the greater part of Belgaum and Dhārwār. The Kanara spice gardens are formed in soil closely resembling the red loam of the hilly tracts in Belgaum and Dhārwār. In the Konkan, soils are classified as rice, garden, or *varkas* (the light and poor soil of the uplands). The open

tracts of land at the bottom of the coast valleys are rice lands. Where the soil is light and easily worked, with a good supply of fresh water, gardens are formed. On the uplands the *varkas* soils yield coarse grains at long intervals.

The dark deep soils described above grow the richest crops —wheat, cotton, gram (*Cicer arietinum*), *jowār* (*Sorghum vulgare*), and *bājra* (*Pennisetum typhoideum*). With irrigation the better red soils may produce spices and sugar-cane, which are still more valuable, but for the most part they grow rice. The lightest soils on the hill slopes yield coarse grains such as *nāgli* (*Eleusine coracana*), and require frequent fallows. The light soils, under a heavy rainfall, give one crop at the end of the south-west monsoon. Elsewhere the crops are divided into *kharīf* or early crops, sown from May to July and reaped from October to December; and *rabi* or late crops, sown from August to October and reaped from February to April. In good soils a double crop is occasionally gathered, the first being sown with the early rains, and the second in October to be harvested in March or April.

System of cultivation.

The system of cultivation varies with the soil. In the black soil plains of the south-eastern Deccan ploughing is resorted to only when fields have grown foul. The surface must be kept free from weeds, and is thoroughly harrowed before sowing. Cattle-manure is applied when available, and a common method of application is by folding sheep and goats when the flocks of professional graziers pass through the country. In the uplands subject to heavy rainfall, where *nāgli* and *vari* are grown, and on the coast for rice cultivation the reddish soils are terraced with great care to hold the flow of water during the monsoon. Here the soil requires regular ploughing, and the heavy clods must be broken by manual labour before sowing commences. The seed is usually sown on a small plot of land upon which a layer of dry grass, leaves, and twigs has been burnt (*rāb*), and the seedlings are afterwards transplanted from the nursery to the fields. Sometimes the whole field is sown broad-cast. In Kolāba and Kanara the wasteful form of tillage known as *dalhi* or *kumri* was formerly common, a patch of forest land being prepared by lopping and burning the trees, and abandoned after two or three crops had been raised. The system is now dying out. Another special method of cultivation in the forest tracts is the growing of *waingan* or hot-season rice. By damming the perennial streams of the Ghāts, the river valleys are converted into stretches of verdant cultivation during the hot months. The

spice gardens of Kanara yield valuable crops of cardamoms, betel, and pepper. The areca-palms and betel-vines require extensive manuring, which the garden owners provide from stable sweepings and decaying leaves. The mixture is heaped round the base of the tree, and covered with branches freshly lopped from the adjacent forest.

Where the water-supply is less plentiful, crops are raised by well-irrigation. Near large cities such as Poona, the use of poudrette is becoming popular, and in the Konkan fish-manure is often used. Throughout the greater part of the Presidency, however, owing to the common practice of using cow-dung for fuel, and to the prejudice against certain other forms of manure, the application of fertilizing materials is carried out on a very limited scale.

In irrigated lands, crops such as sugar-cane, yams, turmeric, *suran* (*Amorphophallus campanulatus*), sweet potatoes, &c., alternate with each other. In 'dry-crop' land, *jowār* in heavy soils and *bājra* in light soils alternate with cotton. The rotation is extended by growing *tur* (*Cajanus indicus*), *til*, or a *rabi* crop of wheat when the fields have grown foul and require cleaning. The practice of growing mixed crops, i.e. leguminous crops with cereals, reduces the necessity of maintaining strict rotation of crops, the former supplying nitrogen to the soil. Nitrogen is the essential plant-food in which Indian soils are poorest.

Except in Sind and on the poorer lands of the Konkan, fallows are not common, owing in some measure to the assessment on the land being payable irrespective of whether cultivation takes place or not.

About three-fourths of the population of the Presidency are engaged in, or dependent on, agriculture. Outside the large centres of industry, such as Bombay City and Ahmadābād, the population may be said to consist almost entirely of the land-owning classes, and of agricultural labourers who assist in the preparation of the land for sowing, in the guarding of the growing crop, and in the subsequent harvesting operations.

Principal food-crops. The principal food-crops are rice, *bājra*, *jowār*, and wheat; rice being specially characteristic of the Konkan and wheat of Sind, Northern Gujarāt, and the Deccan, while *bājra* and *jowār* are grown almost everywhere except in the Konkan. Of non-food crops, cotton is by far the most important, and is characteristic of Gujarāt, the Tāpti valley, and the south-eastern Deccan. The average yield per acre of cleaned rice is 1,200 to 1,320 lb.; that of wheat on irrigated land 1,000 to

1,320 lb., and on 'dry-crop' land 460 to 900 lb.; that of *bājra* about 350 lb.; that of *jowār* from 1,500 lb., if irrigated, to 540 lb. if not; and that of cleaned cotton from 90 lb. in Khāndesh to 130 lb. in Broach.

Throughout the greater part of the Presidency very little cultivable land remains uncultivated. Since 1881 the area cultivated in the Presidency proper has increased from 33,971 to 47,155 square miles; and in Sind, where irrigation has been extended, the area taken up for cultivation expanded from 4,539 square miles in 1881 to 13,052 in 1903-4, and the area actually cropped from 2,821 to 5,932 square miles. No important improvement can be recorded in the selection of seed during this period, the experiments conducted with that object on Government farms not having yet achieved results that can be made the subject of more extensive trials. These farms are situated at Poona, Surat, and Nadiād. Important experiments are being made there with the object of improving the staple of indigenous cotton and discovering a rust-proof variety of wheat.

Land Improvement and Agriculturists' Loans Acts.

The Land Improvement and Agriculturists' Loans Acts provide for small advances being made to cultivators for the purpose of improving their fields by digging wells, erecting protective banks, weeding, &c., or for the purchase of seed and cattle. Such advances were not unknown in the days of Marāthā rule, but until lately they have not been generally popular except in the Southern Deccan. The famines of the last few years have made the system better known; and it is probable that, as it is improved and developed, the sums expended each year will very greatly exceed the totals hitherto reached, the highest of which was 94½ lakhs in the famine year, 1900-1. Loans for the purchase of seed and cattle are repayable in short periods of one to two years, subject to the discretionary power of the Collector to extend the period to not more than ten years. Loans for the improvement of land must, in default of special sanction from Government, be repaid within twenty years, the instalments commencing from the date when the improvement is estimated to yield a return. Bad debts are rare, and the chief difficulty is to meet the very numerous demands received for advances. Agriculturists are specially protected by the Dekkhan Agriculturists' Relief Act (1879), the most important provisions of which have been extended to the whole Presidency, but many of the original peasant proprietors have become the tenants of money-lenders. Statistics of agriculture and irrigation, in

square miles, for the Bombay Presidency, are shown in Table II on p. 135.

Cotton. The cultivation of the great export staple, cotton, is sufficiently important to deserve special mention. Even before the close of the eighteenth century India exported a considerable amount of raw cotton to England, but this was mainly shipped from Calcutta. Bombay, which had previously exported cotton to China, does not seem to have entered into the business until about 1825. For many years afterwards the shipments of cotton were liable to great vicissitudes, depending chiefly upon the yield of the American crop. But the Indian cultivators found their opportunity when the war between North and South in the United States cut off the supplies of the English manufacturer and caused the 'cotton famine' in Lancashire. During the five years ending 1853–4 the export of cotton from Bombay had averaged less than $1\frac{3}{5}$ million cwt., valued at 250 lakhs; in the five years ending 1868–9 the average quantity had risen to $3\frac{4}{5}$ million cwt., and the average value to nearly 20 crores. In the single year 1864–5 the value reached 30 crores. A collapse came in 1865, on the termination of the American Civil War. Prices have fallen very heavily, but the quantity of cotton grown is maintained. In 1880–1 the extent of land under cotton in the whole Presidency, including Sind and Native States, was returned at 6,563 square miles. Of this area, 5,469 square miles were planted with indigenous and about 1,094 square miles with exotic cotton. The quantity exported in the same year was returned at over $3\frac{1}{6}$ million cwt. from Bombay, and 100,000 cwt. from Sind. By 1891, the area under cotton (exclusive of Native States) had increased to 4,934 square miles, and the total exports to $4\frac{2}{3}$ million cwt. In 1901, owing to the drought, the area decreased to 3,701 square miles, and the exports to less than 3 million cwt.; but in 1903–4 the area was 5,906 square miles, and the exports were 6·7 million cwt., of which Germany and Japan each took about 1·4 million cwt., Belgium and Italy 0·9 million cwt. each, Austria 0·7 million cwt., and the United Kingdom 0·4 million cwt.

The growth of the local mill industry has naturally been accompanied by a largely increased local consumption of cotton, the Bombay mills being almost entirely dependent on the indigenous variety. This is a short-stapled cotton which is not suitable for the spinning of yarns above 32's. Cotton of longer staple when sown in the best cotton-growing tracts soon degenerates to the local standard. Numerous efforts have

been made by Government and private persons to introduce a seed that will furnish a better stapled cotton, but hitherto with little success, except in SIND. The most recent experiments have been directed towards the production of a hybrid possessing the hardiness of the local plant and a staple resembling that of imported cottons.

The Bombay Presidency was formerly famous for its hardy ponies which supplied the Marāthā cavalry with their means of rapid movement. The most valuable breeds were the Kāthiāwāri, and the Deccan ponies from the Bhīmthadi or valley of the Bhīma river. Both breeds are still met with, though the latter is now very nearly extinct. Efforts are made by Government to improve local stock by maintaining stallions, chiefly Arabs, at central stations, and by annual horse shows, at which prizes are offered for promising young stock or good brood mares. Up to the year 1903-4, 46 stallions were thus maintained; but, on May 31, 1903, 31 of them, located in Poona and Ahmadnagar Districts, were transferred to the charge of the Army Remount department. At present the Civil Veterinary department has only 12 stallions, 6 of which are located in Gujarāt. Annual shows are held at Ahmadnagar in the Deccan and Jacobābād in Sind. Locally bred ponies are hardy and make good hacks; but they are frequently undersized, vicious, and ill-formed. The horses in use are mainly imported Arabs, Persians, and Australians, the trade in which centres in Bombay City. Domestic animals.

A military remount dépôt exists at Ahmadnagar in the Deccan, where young stock are kept in paddocks, and are trained to draught and saddle. Mules and donkeys are numerous, the former being used for military purposes, and the latter, which are usually under-sized and ill-nourished, for the conveyance of earth and stones.

Cattle are in general allowed to breed promiscuously. Good milch cows are raised in the Gir forest of Kāthiāwār, while the plains of Gujarāt support cattle of exceptionally fine type, large, big-boned, powerful, and docile. The best cattle in the Deccan are bred in the Kistna valley, but throughout the greater part of the Deccan and Carnatic the cattle are of no fixed type or particular breed. They are small, hardy, and active. In Sind good cattle are bred, of medium size but sturdy proportions; the milch cows are well-known and are exported to other parts of the Presidency. The following prices are obtainable for cattle of these different descriptions: Gir cow Rs. 60, bullock Rs. 75; Gujarāt cow Rs. 80, bullock Rs. 125; Deccan

cow Rs. 50, bullock Rs. 35; Sind cow Rs. 70, bullock Rs. 35.

Buffaloes are of four types: namely, Jāfarābādi, Delhi, Surati, and Deccani. They are usually kept for milk, but in Districts of heavy rainfall buffaloes are often used for draught purposes in preference to bullocks. A good cow buffalo fetches Rs. 150. Sheep and goats are numerous throughout the Presidency. The former are of four breeds: Gujarāti, Deccani, Rājputāni, and the *dumba* sheep of Sind with a fat tail. The wool of all varieties is short, coarse, and hair-like, and is chiefly used for the manufacture of country blankets. Goats are regularly milked, and their flesh forms a common article of diet. The number of cattle was greatly reduced by the famine years between 1896 and 1901. In Sind more than 100,000 camels are used for the conveyance of passengers and goods in the desert.

The broad plains of Sind and Northern Gujarāt furnish abundant pasture. In Central Gujarāt the best milch and plough cattle are stall-fed, while the herds of the Deccan for the most part pick up what they can on the borders of the fields, except where, as near the Ghāts, there are forest lands open to grazing. There are no great yearly cattle fairs. The common cattle diseases are rinderpest, foot-and-mouth disease, and anthrax. There are in the whole Presidency 21 veterinary dispensaries, at which 34,320 animals were treated in 1903-4.

The Civil Veterinary department of the Presidency, which is under the control of the Director of Land Records and Agriculture, is responsible for horse-breeding operations, having twelve stallions in its charge for this purpose, and also supervises the working of the various District veterinary dispensaries, seventeen of which are stationary, while four are travelling dispensaries, each in charge of a veterinary graduate. The largest hospital under this department is at Parel on Bombay Island. Horse-breeding operations in Sind are controlled by the Superintendent, Civil Veterinary department, Baluchistān and Sind, under the direct supervision of an Inspector-General for all India.

Irrigation. All tillage in SIND is dependent on the rise of the Indus, which takes place from March to August owing to the melting of the Himālayan snows. The fields are watered either by lift or by flow from innumerable canals and watercourses. The chief systems which take off from the right bank of the river are the Begāri, the Desert, the Ghār, the Western Nāra, and

the Unharwah canals; and from the left bank, the Eastern Nāra, the Dād, the Nasrat, the Fuleli, and the Jāmrao.

In the rest of the Presidency 'dry' and 'wet' crops are found everywhere side by side. Wells are the chief source of irrigation, but canals have also been made, which are supplied with water either from artificial tanks or from rivers that have been dammed up. The largest of such canals are the Nīra at Poona, which is fed by the Nīra river and a reservoir at Bhātghar, and the Gokāk canal in Belgaum District, which draws its supply from the Ghatprabha river and from storage works. Outside Sind the irrigation revenue is raised by a special assessment in addition to 'dry-crop' rates on land irrigated from all works for which capital and revenue accounts are kept, except in the case of some small systems. From old works, for which only revenue accounts are kept, a revenue of about 8 lakhs is derived. The irrigation share of this sum is about 5 lakhs, but this is not credited in the Finance Accounts to irrigation but to land revenue. There is a third class, called Agricultural Works, or works for which neither capital nor revenue accounts are kept, yielding a revenue of about Rs. 12,000 wholly credited to land revenue. The revenue is collected by the Revenue department. In the Presidency proper the total capital outlay on irrigation works up to 1903–4 was about 3 crores; the cost of maintenance during 1903–4 was about 3 lakhs, and receipts during the same year about 8⅓ lakhs, giving a return of nearly 1·89 per cent. on capital outlay. The figures include twelve 'major' works and thirty-one 'minor' works for which capital and revenue accounts are kept.

Tanks are specially numerous in the Southern Carnatic, where almost every village has one, from which coco-palms, sugar-cane, and other rich crops are irrigated. The tendency is for such reservoirs to silt up rapidly, and funds are not always readily available for their clearance. Forced labour is no longer exacted for the repairs of these works, though voluntary subscriptions are accepted.

Wells used for irrigation in the Presidency, exclusive of Sind, numbered 241,600 in 1903–4. They are of two kinds: *pakkā* or masonry wells, costing from Rs. 250 to Rs. 750, and averaging 10 to 20 feet in depth; and *kachchā* or unfaced wells, mere holes in the earth, used for one season, and costing from Rs. 10 to Rs. 50, according to the depth at which water is found. From these wells a few acres of wheat, gram, sugar-cane, fodder-crops, &c., are irrigated, according to the

nature of the soil. They are worked either by a *rahāt* or Persian wheel (an endless chain of buckets), or by a *kos* or *mot*, a large leathern bucket, so suspended as to discharge itself on rising to the surface. The motive power is supplied by a pair of bullocks advancing and retreating on an inclined plane, or moving in a circle. In a few cases a hand-lever and bucket are used to raise water near the surface. Wheat, rice, and sugar-cane are the chief irrigated crops.

Fisheries.

The sea fisheries are important and give employment to numerous castes, chief of which are the Kolīs. Pomfret, sole, stone, and lady-fish are sold fresh, while others, such as the *bombil*, are salted and dried. Large quantities of small fry are sold as manure. The *palla*, found in the Indus, and the *maral* and mahseer are the principal fresh-water fish.

Rent, wages, and prices. Rent.

In the greater part of the Bombay Presidency land is held on the *ryotwāri* system and is in the occupation of the cultivator, who pays revenue direct to Government for his holding. When, as frequently occurs, he has alienated his holding to a member of the non-cultivating classes as security for a loan, the rent exacted from him for continuing to cultivate the land depends very largely on the will of the money-lender. It may be roughly asserted that the occupant is left enough to cover the cost of cultivation and to allow a bare subsistence for himself and his immediate relations. The rest of the produce, after defraying the Government assessment, passes into the hands of the *sāhukar* (money-lender) until the debt is paid off. Land held by females and persons unable to cultivate it themselves is usually sublet for a rent amounting to half the produce after deducting expenses of cultivation.

Rents of these descriptions are generally levied in kind, in contrast to the Government demand, which is payable in cash. Originally payments in kind for rent were universal, and this system is still common in the estates of Gujarāt and Kāthiāwār where land is held by a class intermediate between the state and the ryot. It is usual to set aside a share of the grain for the cost of cultivation and for special cesses, such as the hereditary village servants are entitled to levy. The remaining produce is divided equally between landlord and tenant. An interesting light is thrown on the probable value of land to the cultivator by the fact that good land will frequently sell for fifty times the Government assessment, and will pay a money rent of from two to seven times the assessment.

The summary process of revenue courts is only put into force to enable landlords to recover rent from their tenants

when the revenue officer is satisfied of the fairness of the demand, and when assistance is called for during the year in which the rent is payable. Otherwise the landlords must have recourse to the civil courts, where, under the provisions of the Dekkhan Agriculturists' Relief Act, their claims may be regulated on an equitable basis. The result of this Act has been in some cases to lead to a more equitable adjustment of the burden on the borrowers than was previously possible; but it has also led to evasion, by the exaction of a deed of sale from the borrower in place of a mortgage bond. In newly occupied land on the Sind canals, and in certain cases in the Presidency proper, it has recently become the practice to make the occupancy right conditional on the holding not being alienated, and thus to protect the occupant against himself.

Wages.

The rates for skilled and unskilled labour in the different divisions of the Presidency are: in Sind, skilled 12 annas to R. 1 a day, unskilled 4 annas to 8 annas; in Gujarāt, skilled 8 annas, unskilled 3 annas; in the Deccan, skilled 9 annas, unskilled 3 annas; in the Konkan, skilled 10 annas, unskilled 4 annas; in the Carnatic, skilled 12 annas, unskilled 4 annas. Women, as a rule, earn two-thirds of a man's wages, and children one-half. Payment of agricultural wages in kind is common throughout the Presidency, grain being given at the rate of 12 to 15 lb. per diem for a man, 8 lb. for a woman, and 4 lb. for a child. In Bombay City the demand for labour and the high cost of living have raised the daily cost of unskilled labour to 6 annas for a man and 4 annas for a woman. Skilled operatives in mills and factories earn at least double these rates, the following being the average rates of wages:—

	Rs.	a.	p.		Rs.	a.	p.
Blacksmith	0	14	11	to	1	3	0
Fitter	0	8	0	to	1	4	0
Carpenter	0	12	0	to	1	2	0
Bricklayer	0	12	0	to	1	0	0
Mason	0	12	0	to	1	0	0
Weaver (man)	0	7	6	to	0	8	0
Spinner (man)	0	8	0	to	1	0	0
Dyer	0	8	0	to	0	9	0
Engine-driver	0	12	9	to	1	11	0
Boiler-man	0	5	8	to	0	9	0
Messenger	0	5	0	to	0	5	10

In the export season the great demand for unskilled labour raises its remuneration to 8 annas and over a day, as much as R. 1 a day being paid in times of brisk trade and a scanty

supply of labour. Such a rate can, however, remain in force only for a few days, as it serves to swell rapidly the available supply from the almost limitless reserves of the Ghāt villages, whence cultivators proceed in large numbers to Bombay to work for a few months and return with their savings to their villages, either at the Holi festival (March) or at the commencement of the south-west monsoon. It is a noticeable feature of the Bombay industrial market that weavers are attracted from regions as remote as the United Provinces.

Prices.

It is difficult to arrive at conclusions regarding the progress of prices in the case of the staple food-grains during recent years, owing to the fluctuation in the value of the rupee and the effect of famine years on the general level of prices. The average cash rates per maund of 40 seers (about 80 lb. avoirdupois) have been as follows:—

	Jowār.	*Bājra.*	Rice.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
1880–1 . .	1 15 4	2 5 8	4 0 0
1890–1 . .	1 14 0	2 2 0	3 14 0
1900–1 . .	2 10 1	2 13 6	4 0 0
1902–3 . .	2 0 9	2 3 10	3 10 5
1903–4 . .	1 10 8	1 12 0	3 13 0

The actual rates at the chief centres of trade in the Presidency are given in Table III on p. 136. The recent years of famine and bad harvests have been largely responsible for the excess in price-levels of 1900–1 over those of earlier years. Grains such as gram (*Cicer arietinum*), which are used for food in a less measure than *jowār*, *bājra*, and rice, have risen in price far more than the staple foods. There is no evidence that rates of wages have risen with the price of food, but the system of recording prices current in the Presidency does not seem to justify complete confidence in these data.

Material condition of the people.

The material condition of the people differs little in the various parts of the Presidency, though the standard of comfort among the proletariat is lowest in the case of the wild tribes and highest in the wealthy cities of Gujarāt. For the ordinary cultivator a daily ration of 2 lb. of grain with a little vegetable and spice, and an annual supply of coarse cloth, a little tobacco, and some betel-nut, generally represents the sum of his requirements. A few rupees must be spent on country-made *sārīs* for his women-folk, and perhaps, if the harvest is a good one, a few more will be devoted to joining the annual pilgrimage to some popular shrine. With the hill tribes this modicum of necessaries is reduced by a simplification of the costume, which consists of a head-scarf and a few inches of

cloth at the waist. The diet consists of the coarser grains, *nāchni* and *kodra* replacing *jowār* and rice. An occasional bout of drinking will offer the only opportunity for spending a few coins from their scanty earnings.

Among village officials and middle-class clerks the standard of comfort is undoubtedly rising. A new fashion in clothing, and an increasing use of cheap European commodities, offer objects of expenditure unknown to previous generations. Houses with some pretension to comfort replace the mud hovel of the labourer or the mat shelter of the wandering hillmen; and in the case of a rising official or prosperous trader, the house will be supplied with articles of furniture, such as lamps, chairs, and tables, in European style.

It seems probable that the majority of the community, that is to say, the agriculturists, can live in comfort on an average daily income of from 3 to 4 annas; while the petty officials and village merchants would experience no difficulty in maintaining the standard of their class on a monthly average of from Rs. 20 to Rs. 30. In this and the superior ranks of society the influence of European fashions is specially noticeable.

Forests. Classes of forests. The forests of the Presidency extend over an area of about 15,000 square miles, varying in type from the *babūl* groves of Sind to the magnificent timber tracts of the Western Ghāts. They may be classified as (i) *Babūl* forests, in which this species is mixed with *Prosopis spicigera* and *Tamarix dioica.* (ii) Scrub jungle, merging gradually into fuel and pole forests. (iii) Mixed forests, in which are found teak poles and larger timber of the less valuable kinds, such as *ain*, black-wood, *anjan*, *dhowra*, *bibla*, *hed*, and *kalam*. (iv) High timber forests, chiefly found in North Kanara District and in Western Khāndesh. The valleys of the Kālīnadī in Kanara produce excellent teak, in association with bamboo, *Dalbergia Sissoo*, *Terminalia tomentosa*, and *Xylia dolabriformis*. In Khāndesh also teak of good quality is present, though there the stock has suffered much from fire and shifting cultivation. (v) Evergreen forests of varying constitution, consisting in places of mere scrub jungle, but also containing dense groves of lofty trees whose timber is often valuable in the cabinet-maker's trade. These forests extend along the line of the Western Ghāts from Khāndesh to Kanara.

Administration. About 600 square miles of forest are set apart as pasture land, and the remainder is, in respect of technical management, placed in charge of the Forest department. For purposes of

control, the forests of the Presidency proper are divided into the Northern circle, with 1,667 square miles of 'reserved' and 652 square miles of 'protected' forests; the Central circle, with 6,259 square miles of 'reserved' and 99 square miles of 'protected' forests; and the Southern circle, with 4,495 square miles of 'reserved' and 568 square miles of 'protected' forests[1]. These circles correspond closely with the Revenue Divisions, and each is supervised by a Conservator, who is furnished with the usual staff of deputy and extra-deputy-Conservators, assistant and extra-assistant Conservators, rangers, foresters, and guards. This staff consisted in 1904 of 24 Imperial Service and 23 Provincial Service officers, and of 47 rangers, 168 foresters, and 3,394 guards, maintained at a cost of about 6¾ lakhs per annum. The forests of Sind, which are included in the figures last given, comprise 1,066 square miles of Reserves, and are similarly supervised by a deputy-Conservator, who exercises the power of a Conservator. Responsibility for the executive management of the forests of each District, save in matters relating to professional forestry, is vested in the Collector, who issues his orders direct to the divisional Forest officer. Conservators confine their attention to purely professional matters of forest management, and do not interfere in details of administration.

Relations with the people.

In spite of the care which is taken to control forest operations in the interests of the people, these operations are not popular, as the mass of the population are unable to comprehend the necessity of foresight in forest utilization. The peasant is as a rule wasteful in the extreme: he will not hesitate to burn a valuable forest for the sake of a temporary supply of green fodder or to lop and fell trees in order to provide manure for his crops, without thought as to whether the supply of forest produce will continue to meet the needs of his successors. In the same way, accustomed as he is to permit his cattle to graze at will throughout the whole forest area, he resents measures taken to protect the regrowth from their depredations, while ignorance of the rights or privileges that have been accorded to him by Government too often places him at the mercy of the members of the subordinate forest staff, whom it is at times impossible to restrain from taking advantage of their official position. The illicit grazing of cattle in areas under regeneration is often a serious check to both the improvement and the sustained yield of the forest; and another source of injury exists in the

[1] The figures are for 1903-4.

practice of shifting cultivation, which, before systematic regulation came into force, was responsible for the destruction of large forest areas. Such systematic regulation has, however, been effective in Khāndesh, where Bhīl settlements are located in various Reserves, and in Thāna, Kolāba, and Kanara, where suitable lands have been allotted for dry-ash cultivation.

Fire conservancy.

It has already been remarked that intentional firing of the forests with a view to obtaining a fresh crop of grass is not uncommon, and much damage is also caused by conflagrations due to the carelessness of wayfarers and other accidental causes. The system of fire conservancy consists in the clearing of fire-lines and the protection afforded by patrolling guards. In 1903-4, when 9,441 square miles were under protection from fire at a cost of Rs. 42,905, no less than 1,572 square miles were nevertheless burnt. The annual proportion of failures in fire conservancy averages about 16 per cent.

Working-plans.

In the case of forests which are commercially valuable, working-plans have been prepared in order to regulate felling and regeneration, and to define the areas in which the exercise of local rights of grazing and cutting may be enjoyed. These working-plans are compiled by the officers of the Forest department, with the approval of the Collector and the sanction of Government. They are based on the principle that the forest interests must be subordinated to those of the agricultural population when there is any conflict between the two.

Yield of the forests.

The yield of the forests may be divided into major and minor produce. In 1903-4 the output of timber was 4,740,000 cubic feet, realizing about 15½ lakhs. The production of first-class logs is confined almost exclusively to the Kanara forests, whence the timber is brought to dépôts on the Southern Mahratta Railway. It consists of teak and blackwood of very fine quality, which commands a ready sale, while at the same time these forests yield annually about 100,000 sleepers of teak and jamber. From the forests of Kanara, Belgaum, Dhārwār, Thāna, and Khāndesh several hundred thousand teak rafters used in native house-building are exported. Firewood sales in 1903-4 amounted to nearly 47,000,000 cubic feet, of an estimated value of 6½ lakhs. The North-Western and Southern Mahratta Railways receive the bulk of this out-turn, and the remainder is absorbed in the Bombay market or utilized locally. Besides this, large quantities of fuel are granted free of charge to those living in the vicinity of the forests. The yield in minor forest produce

is also of importance. In 1903–4 the revenue derived from this source amounted to Rs. 1,60,000 (exclusive of $3\frac{1}{2}$ lakhs derived from grazing and grass), of which the chief item was myrabolams, exported to Europe for tanning purposes. Next in importance come *rosha* grass, catechu or cutch, wax, honey, lac, *mahuā* flowers, sago, *shikakai*, spices such as cinnamon and nutmeg, *babūl* pods, leaves, bark, and medicinal seeds and roots. As a rule the collection of these products is carried out by contractors.

Revenue and expenditure.

The total forest receipts and expenditure for the financial year 1903–4 amounted to 27·5 and 17·7 lakhs respectively, giving a surplus of 10 lakhs. The average figures for the ten years ending 1890 were about 26 and 16 lakhs, and for the following decade about 32 and 20 lakhs respectively. The surplus is mainly provided by the Southern circle, while the Central circle shows a deficit.

Mines and minerals.

With the exception of building stone and salt, the production of minerals in the Bombay Presidency is insignificant. The best stone for building is extracted from quarries near Porbandar and Dhrāngadhra in Kāthiāwār, whence it is carried by sea in large quantities to Bombay. The production of salt is described below. Parts of Dhārwar District are believed to have yielded in the past considerable quantities of gold. Even now small quantities of gold-dust are washed in some of the streams; and in the east of the District, where the hills are known to contain gold, prospecting operations yielded favourable results, and a company with English capital is now at work. Mining operations undertaken recently at Alnāvar in the same District were unsuccessful. Agates are found in small quantities in the Deccan and Gujarāt.

Arts and manufactures.

In the Bombay Presidency many years of competition between machine-made and hand-woven cotton cloth have still left a very considerable home industry, the hand-loom being at work in almost every District. The output is, however, for the most part confined to *sārīs* and turbans, with a certain quantity of grey cloth of the very coarsest kind. Hand-spinning is not yet extinct, but is rarely relied on by professional hand-weavers for their supply of raw material.

Cotton-weaving.

The number of hand-workers employed in cotton-weaving in 1901 was 183,000, with 167,000 dependants. They are for the most part Hindu Koshtis, Sālis, Hatkars, and Devangs, with a certain number of Musalmāns known as Julāhās and Tais. The Districts of Poona, Nāsik, Sholāpur, Dhārwār, and Belgaum are noted for weaving; but the highest point

of excellence is reached in Ahmadābād and Surat, where some of the most skilful weavers in India are to be found. In the manipulation of designs woven into the cloth they are on a level with the best workers of Madras. The hand-made cotton fabrics compete in the market with an immense import of machine-made goods, but the few fabrics for which the workers still hold a reputation will probably continue for many years to be in steady demand.

Dyeing and printing. Dyeing of both yarn and cloth is carried on wherever sweet water can be found, and supports a population of 36,000. In the north of Gujarāt the favourite colour is red, and in Kāthiāwār red, deep-brown, and yellow. Blue and green, along with red and yellow, are more prevalent in South Gujarāt and in the Marāthā Districts. In addition to village dyers, about 1,900 persons are employed in three steam dye-works at Bombay and in one at Ahmadābād, which yearly turn out goods (chiefly turkey-red) to the value of 30 lakhs. The old native vegetable dyes have been superseded by alizarine and similar colours. These, though cheaper, more easy to apply, and quicker in taking effect, are at best often harsh and glaring and soon fade. In Sind and in the Gujarātī-speaking Districts printed cotton goods are extremely popular, whereas Marāthās usually wear plain stuffs of cotton and silk, dyed in the thread, and decorated with metal-leaf, or with a simple border and a fringe (*padar*) of a different colour at one end. *Chandari* or knotting is another method of decorating cotton and silk goods.

Silk-weaving. About 63,000 people are supported by silk manufacture. The raw material is imported from China, Bengal, Persia, or Bangalore, either in the cocoon or in skeins, both raw and dyed. Silk goods are manufactured at Ahmadābād, Surat, Yeola, Nāsik, Thāna, and Bombay, all by hand-workers, except in the case of two mills with about 1,200 operatives at Bombay and one mill at Poona. The material is often decorated with printed or woven designs, knot-work or embroidery, and is prepared chiefly for *sārīs*, brocades (*kamkhwabs*), trouser stuffs, and turbans.

Embroidery. Wire-drawn gold and silver threads are largely used in ornamental edgings for *sārīs*, the richest of which are made at Poona and Yeola. At Bombay also gold and silver thread are used for making lace, but everywhere imported thread is displacing the locally spun article. Embroidery on silk and cotton cloth in gold, silver, and silk thread is produced at Hyderābād in Sind, chiefly for the European market. The

best silk embroidery is produced at Navānagar and Gondal in North Kāthiāwār, though Cutch gets the credit of the manufacture. Baroda, Surat, and Bombay also supply embroidery to Muhammadans and Pārsīs.

Woollen goods.

There are three woollen mills in Bombay with 385 hands. Woollen goods are in little demand. The only important product is the country blanket made in the Deccan and Carnatic by the Dhangars from home-grown wool. In Sind saddle-cloths and blankets and felts are made. About 50,000 persons in all parts of the Presidency are employed in cutting, retting, and scutching *san*-hemp for export, in twisting and spinning hemp, flax, and coir into ropes and cordage, and in plaiting and weaving them into mats, nets, and sacking for export and home use.

Fibres.

Gold and silver ornaments.

The custom of investing savings in gold and silver ornaments gives employment to many goldsmiths. The metal is usually supplied by the customer, and the goldsmith charges for his labour from 8 annas to Rs. 3 the *tola*, which is somewhat less than ½ oz. avoirdupois. The poorer classes often wear ornaments of baser metal. Sind goldsmiths' work is very beautiful, but is rarely seen outside that province. The well-known Cutch gold- and silver-work is embossed by hand on a backing of soft lac. Many Cutch silversmiths have settled in Ahmadābād, Bombay, and Karāchi. Silver-ware similar to the Cutch work is made at Ahmadnagar in the Deccan, and strong and massive articles of gold and silver are produced in Kāthiāwār. The women of Gujarāt prefer ornaments of a plain and massive style, while those of the Deccan favour lighter and more intricate patterns. Nāsik and Poona are both celebrated for their brass-ware, and Bombay and Ahmadābād produce large quantities of copper vessels which are sent to almost every part of Western India. T he copper is all imported from Europe in sheets and is hammered into shape by the local workmen. The cutlery and agricultural implements required by the people are still for the most part made locally by the village Lohār or blacksmith. The only goods which have more than a local reputation are the spear-heads of Ahmadnagar, the knives and other tools of Amod in Broach, and the swords, spear-heads, and chain armour of Cutch, Kāthiāwār, and Baroda.

Brass- and copper-ware.

Iron and steel work.

The importation of kerosene oil in tins has given rise to a new industry. Enterprising Bohras in Bombay and up-country buy up the empty tin cases at from 2 to 2½ annas each, and fashion them into lanterns, kerosene lamps, cash-

boxes, travelling-trunks, oil and *ghī* pots, and other cheap articles. There is a tin factory in Bombay with 70 workers. Glass-making is confined to bangles and fancy articles, for which the chief centre is Kapadvanj. Lac is collected in Khāndesh, and used in making bangles in the Pānch Mahāls and in lacquering furniture in Sind and Gujarāt. In Bombay and Gujarāt bangles are also made from imported ivory and tortoise-shell. Glass-making, &c.

Coarse pottery is made almost everywhere, but glazes are seldom used. The best is made in Sind, whence the industry taught in the Bombay School of Art is derived. The humble brick-kilns of the village Kumbhār or potter have held their ground against steam factories. Pottery.

Ahmadābād and Surat are the chief centres of wood-carving. Carved black-wood furniture is out of fashion, but house fronts and wall ornaments are still popular. The best work in sandal-wood is done in Kanara. Country carts are made in every large town, and pony tongas at many places in the Deccan. Native boats are built at most of the coast ports, especially in Surat and Kanara. Certain low castes all over the Presidency are expert at weaving matting and baskets of split bamboos. Shoes, sandals, harness, water-skins, and other leathern articles in general demand are made by the local Mochī, who is found in every village. He is usually his own tanner, and prepares his materials with the aid of the bark of the *babūl* tree. Large numbers of people are employed in the curing of hides for exportation, of which 38 lakhs' worth are sent to Europe yearly. In one factory leathern industries are carried on by the aid of machinery. Very good boots and shoes, saddles, and bags are made in European fashion by native workmen under European superintendence at Bombay and Poona. Fancy articles of bison and other horn are moulded and carved with considerable skill in Ratnāgiri and Kanara. Country cigarettes (*bīdīs*) are made on a large scale at Bombay from up-country tobacco, chiefly from Gujarāt and the Deccan. The best snuff comes from Viramgām in Ahmadābād. Attempts have been made at Kaira to manufacture cigars to suit the European taste, but without success. Sugar is made wherever the cane is grown, and very largely in Thāna and Khāndesh. Except in parts of Sātāra and Ahmadābād, iron roller-mills have superseded the primitive wooden sugar-mill. Oil-presses are numerous in every District, and oil is extracted from castor-seed, sesamum, rape-seed, poppy-seed, *mahuā* (for soap-boiling), linseed, ground-nuts, and coco-nuts. In some branches the local industry has

Wood-carving. Carts and boats. Leather. Horn-ware. Sugar. Oil-presses.

suffered from the competition of kerosene oil, but this loss has, to a great extent, been balanced by the great and growing demand for vegetable oil for machinery. Grass oil is made in Pimpalner and West Khāndesh. Two steam-power oil-mills are at work in Bombay, and another at Ahmadābād. The trade in clarified butter is very great, being of special importance in Kaira and Khāndesh. Large quantities of *ghī*, some of which is more or less adulterated with animal fat, are exported to Rangoon. There are a few model dairies producing good butter in Bombay and Poona.

Butter.

Salt, &c.

Salt is made in large quantities in the Government works at Khārāghoda and Udu in Ahmadābād, and is exported by rail to Gujarāt and Central India, where it is known as Baragara salt. Sea-salt is very largely made on the Konkan coast for export to Malabar and Bengal. There are numerous small ice and soda-water factories in the larger towns. Though rice-husking is chiefly carried on without machinery, steam rice-husking mills have been started with success at Bulsār, Ahmadābād, and Chinchni in Thāna. Flour-grinding is still a domestic industry in most places except Bombay.

Printing presses.

High art hardly exists, though Portuguese, Pārsīs, and Hindus have done creditable work in illustration, design, and sculpture. Excellent English printing comes from presses managed by Europeans. Vernacular printing is improving, especially in Bombay, where the demand for newspapers and new books is rapidly increasing.

Cotton-mills.

Within the last twenty or thirty years the spinning and weaving of cotton by steam machinery has become an important industry, a development favoured by the proximity of the supply of raw material. The first mill was started in Bombay in 1857. By 1881–2 the number had increased to 49, and the industry has since expanded steadily, until in 1904–5 there were 133 mills, exclusive of 2 hosiery factories, in the Presidency, and 3 others situated in Native States. Of the 133 mills, 55 were weaving and 78 spinning mills.

Details of the cotton-mills are given in the following table:—

	1881–2.	1891–2.	1901–2.	1904–5.
Number of mills	49	96	129	136
" looms	13,046	19,117	31,262	35,887
" spindles	1,237,536	2,380,178	3,353,729	3,573,564
" hands employed	37,567	79,951	119,929	132,170

For many years the mills produced mainly yarns, chiefly of coarse counts, to meet the demand of Indian hand-weavers

and of the China market; but of late years many weaving-sheds have been erected. The best mills can now produce fine cloth manufactured from imported high-count yarns, and coloured as well as fancy goods of superior description. During the years of famine and plague between 1896 and 1901, the industry passed through a period of depression, but brighter prospects are in store when the trade assumes its normal course. The cotton-mills consume annually about 6,000,000 cwt. of raw cotton. The output amounts to 415,000,000 lb. of yarn and 112,000,000 lb. of cloth for the whole Presidency (including Native States). Eighty-six (including 2 hosiery factories) of the mills are found in Bombay City and Island, where the moist atmosphere favours the processes of spinning and weaving. Outside Bombay, the city of Ahmadābād is the only centre of importance. The chief articles manufactured are yarns of counts up to 32's, *dhotīs*, shirtings, *chadars*, T cloths, sheetings, coloured and fancy goods. A large local demand exists for the products of the mills; and there is also an export trade of considerable value, amounting to about 318,000,000 yards of cloth and 280,000,000 lb. of yarn annually, with a total value of about 14 crores. The mills in Bombay draw large numbers of labourers from the Konkan Districts of Kolāba and Ratnāgiri, and from Sātāra, Poona, and Ahmadnagar in the Deccan. These, for the most part, return to their homes at intervals for such agricultural operations as their continued connexion with the land requires. They earn good wages, which average for a man 8 to 12 annas, for a woman 4 to 6 annas, and for a child 2 to 3 annas daily. The hours of labour for women and children are strictly regulated by the Indian Factories Act; and it does not appear that the work has any ill effect on the physique of the operatives, who compare not unfavourably with other labouring classes.

Other factories.

Including cotton-mills, 432 factories, within the meaning of the term in the Factory Act, were at work in the Presidency in 1904. Of these, 213 are open throughout the year and 219 at special seasons only. The City and Island of Bombay and the Districts of Khāndesh and Ahmadābād contain the majority of these factories. Of the total number of operatives (182,910) employed in these factories, 146,208 are engaged in mills and factories dealing with cotton, 1,621 in other textile industries, such as wool and silk-weaving, 3,506 in printing presses, 561 in flour-mills, 27,336 in workshops, and 3,678 in miscellaneous works. The ginning, cleaning, and pressing of cotton occupies

216 factories, the majority situated in the rich cotton tracts of Khāndesh. There are fourteen iron and brass foundries, mainly in Bombay City, and a few flour-mills, printing presses, railway workshops, oil-mills, or mills for spinning and weaving silk and woollen goods. The recent attempts to start factory industries in matches, paper, carpets, and leather have not so far developed industries of importance. It is estimated that the total factory population of the Presidency, including workers and their dependants, amounts to about 250,000.

Commerce and trade. General character.

Before the Marāthā Wars, which led to the annexation of most of the present Bombay Presidency (excluding Sind), trade was carried on with the dominions of the Mughals and Marāthās through the Company's settlements at Bombay and Surat. Thence many a deeply-laden East Indiaman set sail, carrying fine cotton goods and spices for the London market. With the acquisition of Sind in 1843 the Presidency assumed its present configuration. Since then the trade with Europe has naturally been drawn to Bombay, which has the finest harbour in India, while the produce of Sind and the Punjab is exported from Karāchi. Both have benefited largely by the opening of the Suez Canal and the consequent abandonment of the Cape route (1869). In the harvest season the broad plains of the Deccan and Carnatic furnish a steady stream of cotton, wheat, and seeds to the shipping in Bombay harbour, while Karāchi exports wheat drawn from the irrigated areas of the Indus valley. In exchange, these ports receive numerous imports, of which the chief are cotton goods, metals and machinery, sugar, and kerosene oil. Aden is a port of call for the trade between Europe, East Africa, and Asia, and has a considerable local traffic in coffee with Arabia and the Somāli coast. A small direct trade is carried in native craft between Broach, Bulsār, Surat, Honāvar, and ports in Arabia and the Persian Gulf. The distribution of trade from the larger ports along the coast-line is effected by coasting steamers and native craft during the fair season. Bombay City, Karāchi, and Aden have Chambers of Commerce and Port Trusts, and Bombay and Ahmadābād have influential associations of native piece-goods merchants.

Within the limits of the Presidency trade is facilitated by the railways running north and south, and fed by cart traffic along metalled roads. In the hilly regions of the Ghāts, trains of pack-bullocks are still to be met carrying salt from the coast up the passes that are too steep for carts, and returning with grain and molasses for residents of the lowlands

Internal trade.

The principal objects of internal trade are grain, metals, and cotton goods. Conspicuous among the traders in every town of importance will be found the Mārwāri Vānī from Rājputāna, the Lohāna in Sind, the Vānī, Bohra, and Memon in Gujarāt; these with the Bhātia, Khoja, and Pārsī in Bombay, and the Lingāyat Banjig of the south, are representative of the local castes in control of internal trade. Where pack-bullock trains are still in vogue, Lamānis and Vanjāris are in charge of the means of transport. The important trading centres of the Presidency, after Bombay and Karāchi, are Ahmadābād, Surat, Bhusāwal, Poona, Sholāpur, and Hubli; and in Sind, Hyderābād and Sukkur. In the distribution of miscellaneous articles advantage is taken of the numerous fairs held at places of pilgrimage to establish temporary bazars, where a brisk business is done with the public.

Rice, coco-nuts, salt, cotton, timber, and piece-goods are the staples of the coasting trade. The chief maritime Hindu castes are Bhandāris, Khārvās, Bhois, and Kolīs; but many of the best sailors are Musalmāns from Cutch, Kāthiāwār, and the Maldive Islands.

The value of the internal trade of the Presidency recorded for large areas or registration blocks in 1903–4 was about 92 crores, of which one-quarter is sea-borne and the rest carried by rail. In 1903–4 about 128,000 vessels of 4,345,000 tons burden engaged in the local coasting trade entered the ports of the Presidency, and about 114,400 vessels of 4,113,000 tons burden cleared thence. Of the total number of vessels, about 6,000 were steamers.

External trade.

The total value of the trade of the Bombay Presidency with other parts of India by sea and rail is 74·7 crores, consisting of 43·2 crores imports and 31·5 crores exports. The chief articles of trade are piece-goods, grain, and coco-nuts. About 13 per cent. of this trade is sea-borne, and the rest travels inland by road and rail. There is nothing to differentiate it from the internal trade of the Presidency, which has already been described above. A very considerable share of the trade of India with foreign countries is carried on from the ports of the Bombay Presidency. In 1903–4 this share had attained a total value of 146·6 crores: namely, imports 68 crores and exports 78·6 crores. Of this, a small portion (imports 47 lakhs and exports 41 lakhs) represents trade by land across the Sind frontier with Kandahār and Herāt. The remainder is entirely maritime. Of the total foreign trade of the Presidency (exclusive of Sind), 28 per cent. in 1903–4 was with the United

Kingdom, 16 per cent. with China, 6 per cent. with Japan, 7 per cent. with France, 7 per cent. with Belgium, and 6 per cent. with Germany. Other countries claiming at least 3 per cent of the trade are Austria, Italy, and Mauritius. Table IV on pp. 136–7 gives the value of the chief imports and exports for the years 1891, 1901, and 1903–4. The figures shown above differ from those given in the table, as they include Government stores and treasure. It will be seen that the leading articles of import are cotton piece-goods, metals and machinery, sugar, oils, and silk and woollen manufactures. The chief exports are raw cotton, grain and pulse, seeds, hides, and opium. The bulk of the imports is supplied by the United Kingdom, though Belgium has recently proved a formidable competitor in iron and steel. The exported cotton is mostly directed to the continent of Europe and Japan, while opium is sent to China, with cotton twist and yarn manufactured in the Bombay mills. During 1903–4, 1,516 vessels of 2,158,000 tons burden engaged in foreign trade entered the ports of the Presidency, and 1,348 vessels of 2,150,000 tons burden cleared thence.

Means of communication. Railways.

At the close of the year 1904 there were 4,137 miles of railways in the Presidency. In that year there was one mile of railway to every 46 square miles of country, compared with one to every 61 in 1901. The chief railways are the Great Indian Peninsula, the Bombay, Baroda, and Central India, and the Southern Mahratta; the first two with a 5½-feet-gauge, and the last with a metre-gauge line. The Great Indian Peninsula starts from Bombay and bifurcates at Kalyān towards Calcutta and Madras, climbing the Ghāts by the Thal and Borghāt passes. At Bhusāwal the Calcutta line again divides, to join the East Indian Railway at Jubbulpore and the Bengal-Nāgpur at Nagpur. The Calcutta and Madras lines are connected by the Dhond-Manmād section, which carries traffic between Madras and Northern India without compelling passengers and goods to descend and reascend the Ghāts. The 2½-feet-gauge light railway which connects Pandharpur and Bārsi town with Bārsi Road junction is also under this company's management. Since 1900 the Great Indian Peninsula Railway has been a state line, worked by a company. The Bombay, Baroda, and Central India Railway is a guaranteed line which was purchased by the state in 1906. It runs due north along the sea-coast past the cities of Surat, Broach, and Baroda, to Ahmadābād, where it connects with the Rājputāna-Mālwā metre-gauge state line

to the north. This line and its 17-mile branch from Pālanpur to Deesa are worked by a company, as also are the Dabhoi 2½-feet-gauge line connecting Padra and Chandod, the Mehsāna metre-gauge railway 93 miles long, and the Vijāpur-Kālol-Kadi metre-gauge line, completed in 1903. These three last lines belong to the Baroda State. A branch line connecting Ahmadābād with Idar is also managed by the company. A westerly branch of the company's system from Ahmadābād to Viramgām brings the Presidency into touch with the railway system of the Kāthiāwār peninsula, which comprises the Bhavnagar-Gondal-Junāgarh-Porbandar (334 miles), the Jāmnagar (54), the Jetalsar-Rājkot (46), and the Dhrāngadhra (21) railways, which are all metre gauge; and a 2½-feet-gauge line (90 miles), connecting Morvi with Rājkot and Wadhwān, the greater part of which was converted to metre gauge in 1905. Another branch of the Bombay, Baroda, and Central India, with a 5½-feet gauge, starting from Anand, connects with the Rājputāna-Mālwā Railway through Godhra at Ratlām. From the junction the latter railway has a branch running south through Indore and Mhow to Khandwā, and a broad-gauge line is being made through Central India to Muttra. A chord-line from Baroda to Godhra has recently been opened. Other lines under the same management are the Rājpīpla, 2½-feet gauge (37 miles), through Broach and Rājpīpla, and two 5½-feet-gauge lines, the Anand-Petlād-Tārāpur (22 miles) linking Kaira, Baroda, and Cambay, and the Tārāpur-Cambay (11 miles). In Gujarāt the Ahmadābād-Parāntīj and Ahmadābād-Dholka metre-gauge lines are owned by private companies, with rupee capital raised in India, both being managed by the Bombay, Baroda, and Central India Railway. An important line recently constructed, known as the Tāpti Valley Railway, connects the Bombay, Baroda, and Central India Railway at Surat with the Amalner-Jalgaon branch of the Great Indian Peninsula Railway at Amalner. This is a standard-gauge line owned by a private company, with rupee capital. The south of the Presidency is served by the Southern Mahratta Railway, which has two branches. One starts from Poona and runs south to Londa, where it doubles back towards Dhārwār, Hubli, and thence south-east to Harihar, where it joins the Mysore State Railway, with a short extension from Londa to Castle Rock to connect with the West of India Portuguese Railway; the other branch connects Hotgi on the Great Indian Peninsula Railway (Madras line) with Gadag and Hubli through Bijāpur. This is a state railway on the

metre gauge, worked by a company. A metre-gauge branch line from Mirāj Junction to Kolhāpur, 29 miles in length, is under its management. It has access to the sea by the West of India Portuguese Railway, of which it has recently acquired the management, and which connects the Carnatic with the port of Marmagao near Goa. In Sind the North-Western Railway, starting from Karāchi, travels up towards the Punjab on the right bank of the Indus, a branch on the left bank going from Kotri as far as Rohri. At Ruk it connects with the line to Quetta, and at Hyderābād with the metre-gauge line to Mārwār Junction in Rājputāna. It is a standard-gauge line owned and worked by Government. A direct line from Bombay to Sind is in contemplation.

Light railways. An experiment in light railways was inaugurated in 1897, when the Bārsi line, from Bārsi Road on the Great Indian Peninsula Railway to Bārsi town, was opened for traffic. This line, which is 21½ miles long, is constructed on a 2½-feet gauge, with a capital of 13½ lakhs of rupees, and is owned by a private company. In 1904 it carried 77,000 passengers and 60,000 tons of goods, and made in net earnings over Rs. 65,000. It has recently been extended to Pandharpur in Sholāpur District. The special feature of this line is the great carrying capacity of the trucks in respect to the width of the gauge.

Tramways. There are three public tramway systems in the Presidency: in Bombay City, at Karāchi, and at Nāsik. The Bombay tramways, owned by the municipality and worked by a company, have a length of track of 17¾ miles, mostly double, and carried about 25 million passengers in 1904. The Karāchi tramway, owned and worked by the East India Tramway Company, carried over 2½ million passengers in 1904. The Nāsik tramway, also owned and worked by a private company, with a capital of one lakh, runs between Nāsik Road Station on the Great Indian Peninsula Railway and Nāsik town. It conveys on an average 150,000 passengers a year over a length of 5 miles. Owing to successive years of famine and plague it has so far run at a loss. The Bombay tramway is now being converted from horse to electric traction. The other two are drawn by horses. None of the lines is guaranteed in any form.

Coasting steamers. Communications are maintained along the coast by the British India line of steamers, sailing at regular intervals for Karāchi and the Persian Gulf and for Mangalore. The coast ports between Mangalore and Bombay are served by vessels of the Bombay Steam Navigation Company, which leave daily

for ports north and south of Bombay. A ferry service exists in Bombay harbour.

Roads.

There were in 1904 more than 6,550 miles of metalled roads in the Presidency, maintained at an annual cost of 13 lakhs. The chief roads are the Bombay-Agra trunk road, starting from Bombay and running north-east through Thāna, Nāsik, and Khāndesh; and the road from Poona to Bangalore. About 3,700 miles of metalled roads are in charge of the Public Works department and 308 miles are under local boards. There are also 19,849 miles of unmetalled and unbridged roads, serving for communications between less important centres of trade. Of these, 15,631 miles are maintained by local authorities and 4,218 miles by the Public Works department. Native States maintain 2,061 miles of metalled roads and 3,550 miles of unmetalled roads. The cost of the former is about 3 lakhs. On the Ghāts the hilly roads are served by pack-bullocks.

Post and telegraph.

The Presidency proper contained in 1903–4 1,962 post offices. The inland mails are conveyed over 14,000 miles of lines, and 10,000 persons are employed in postal work. Progress in this department of the administration has been steadily maintained since the opening of the first office in 1853–4. During the last forty years the number of post offices has quadrupled, and the length of postal lines has increased by 30 per cent. In every branch of business the volume of work done expands continuously.

The Presidency of Bombay and the Native States attached thereto (with the exception of Bhor and Junāgarh, which have their own postal arrangements, and Khairpur) form, together with the State of Baroda and certain post offices in Hyderābād State, a postal circle under a Postmaster-General. The post offices at Aden, Bushire, Basra, Baghdād, Muhammarah, Linga, Muscat, Bahrein, and Bandar Abbās are also controlled by the Postmaster-General of Bombay. The table on the next page shows the progress of postal business. Unless otherwise expressly stated, the figures do not include those of Baroda or of any post offices in Hyderābād State. Both the Post and Telegraph departments are directly controlled by the Government of India. A full account of them is given in Vol. III, chap. viii.

Famine.

The usual cause of famine or scarcity is partial or total failure of the crops due to insufficient or untimely rainfall. The effects of this failure are widely felt, owing to the large proportion of the population dependent on agriculture for a livelihood. In

the case of the labouring classes usually employed in the fields, the pressure of bad seasons is enhanced by the fact that the same cause greatly increases the cost of food while it decreases the prospects of employment. Sind, being wholly cultivated with irrigation, is practically immune from famine. The western coast similarly suffers little from this calamity, being certain of an ample rainfall. In the Deccan plains and the East Carnatic the ordinary rainfall is so light that a very small reduction or postponement of the monsoon showers materially diminishes the output, and these tracts are therefore liable to frequent crop failures. In Gujarāt rain failure occurs less frequently. In the famine tracts the most valuable crops are sown during the late rains, i.e. during September or October. Hence the early cessation of the monsoon produces the most serious results, far exceeding the loss caused by deficiency at the beginning. The chief late crops are cotton, wheat, *jowār*, gram, and oilseeds. If the failure of the monsoon is followed by widespread rise of prices and the influx of beggars into the towns, measures of relief will be required.

	1880-1.	1890-1.	1900-1.	1903-4.
Number of post offices	688	1,276	1,494	1,962
Number of letter boxes	1,839	2,309	4,184	7,376
Number of miles of postal communication . . .	14,295*	14,837*	16,204*	19,475*
Total number of postal articles delivered:—				
Letters . .	23,195,463*	31,749,159*	41,070,660	49,148,162
Postcards . .	2,734,137*	22,346,786*	43,432,418	55,841,141
Packets . .	418,525*	1,413,280*	4,076,713†	5,411,255†
Newspapers .	1,713,127*	3,837,975*	4,525,791‡	5,224,506‡
Parcels . .	134,294*	255,787*	354,545	686,317
Value of stamps sold to the public . .	Rs. 11,73,676*	Rs. 18,57,710*	Rs. 23,30,234*	Rs. 30,57,708
Value of money orders issued . . .	47,08,720*	1,65,54,290*	3,11,11,400*	3,08,44,507*
Total amount of savings bank deposits .	...	1,97,68,396*	2,67,45,794*	3,38,19,038

* These figures include those of Baroda and of the offices in Hyderābād State under the Postmaster-General of Bombay.

† Including unregistered newspapers.

‡ Registered as newspapers in the Post Office.

History records many famines in the area now constituting the Bombay Presidency. They have sometimes been caused by war, floods, or the depredations of rats and locusts, as well as by drought. Up to the nineteenth century the most noteworthy of these calamities occurred in the years 1259–62, 1396–1407 (the great Durgā-devī famine), 1472–3, 1629, 1681, 1684, 1698, 1719, 1732, 1747, and 1791–2.

Of the notable famines of the nineteenth century, those which affected considerable areas are described below, detailed information about local calamities being given in articles upon the Districts concerned. One of the worst occurred in 1802–3 from the depredations of Holkar's army, which on its march to Poona laid waste the whole country-side. The Pindāris followed in Holkar's wake and reduced the Deccan and Carnatic to such depths of misery and want that cows, buffaloes, and even human beings are said to have been devoured by the starving peasantry. The price of grain stood at 1½ lb. per rupee; and notwithstanding the activity of private charity, and importations of grain and liberal remissions of revenue by the Peshwā's government, continuous hordes of starving emigrants poured into the Konkan and Gujarāt, leaving a trail of dead and dying behind them. The failure of the late rains of 1803 accentuated the calamity wrought by human agency; the river at Poona was black with putrescent corpses; and hunger, hand in hand with cholera, left numerous villages permanently desolate. Among those who endeavoured with some success to mitigate the prevailing misery were Lady Mackintosh in Bombay, who collected a subscription of £4,000 for relief, and General Wellesley, who improvised relief works and free doles for the people of Ahmadnagar. 1802-3.

In 1812–3 the northern Districts of the Presidency were attacked by swarms of locusts from Mārwār, which covered Kāthiāwār and Gujarāt as far south as Broach and entirely devoured the crops. No sooner had the scarcity thus caused assumed definite proportions than Gujarāt had to face a total failure of rain which, coupled with enormous immigration of diseased and starving Mārwāris, placed her in most pitiable straits. Private help was liberally but unmethodically bestowed, and every roadside was crowded with men, women, and children, famished and moribund. 'During this time of misery,' wrote Captain Rivett Carnac, 'I have seen a group of Mārwāris deny a little water to a dying woman with a dead infant at her breast. Dogs, by feeding on human flesh, grew strangely fierce. I have seen a pack of them carry off a living child from its dead mother's arms. Even among the higher classes so keen was the distress that for a few shillings Brāhmans sold their relations, children, and wives.' Pestilence walked hard upon the heels of famine, and in Ahmadābād alone slew 100,000 people. 1812-3.

The famine of 1819–20, due in Broach to two years' excessive rainfall and in the Deccan to a failure of the monsoon, 1819-20.

was actually less severe, but remarkable for widespread panic which for seven or eight months emptied considerable tracts of
1824. the Deccan of their inhabitants. In 1824, a year remembered as that of *kharpad* or 'distress,' the failure of rain throughout the Presidency raised grain prices to famine level and caused widespread scarcity, which was only partially mitigated by large remissions of assessment and by the opening of relief works in various Districts. Emigration, notably to the Nizām's territory, continued until October, when a timely fall of
1832–3. rain brought relief. The scarcity of 1832–3, though affecting both the Deccan and the Carnatic, was chiefly felt in the latter region. Grain robberies were frequent; lack of fodder caused high mortality among cattle, and drove shepherds and graziers from their homes; the carrying trade in some places was temporarily brought to a standstill. The opening of relief works and orders to grain-dealers to keep down prices helped the people to tide over the scarcity, which lasted for eight or nine months.

1834. A considerable portion of Gujarāt and Khāndesh was similarly affected in 1834, distress in the former area being augmented by the ravages of locusts. Grain was sold at Rs. 4 a maund, and the cattle suffered severely from want of fodder. In Kaira alone remissions of Government revenue amounted to nearly 2 lakhs. Scarcely had the people time to recover from the effects of this famine, before they were plunged in
1838–9. more acute distress by a total failure of rain in 1838. Not only Gujarāt and Khāndesh but also Thāna District witnessed the wholesale desertion of villages; and such live stock as survived were driven to seek a bare sustenance among the hills. Portions of Thāna were relieved by the timely arrival of shiploads of rice from Malabar; but in the northern districts relief works had to be opened, and revenue, amounting in Khāndesh to $6\frac{2}{3}$ lakhs and in Surat to 5 lakhs, was remitted.
1853–4. Fourteen years later, in 1853–4, the Northern Konkan, the Pānch Mahāls, and parts of the Deccan were attacked by serious scarcity. Sholāpur was the greatest sufferer among the Deccan Districts and poured hundreds of starving and destitute villagers into Bijāpur, where they were employed by Government upon road construction. In Thāna and Kolāba a failure of the late rains of 1853 was followed by an equally destructive excess of rain in 1854, while at the moment when the people might have commenced to profit by the liberal actions of Government, a terrific hurricane, sweeping across the coast villages, destroyed the last vestiges of crops and

cancelled all hopes of speedy recuperation. In 1862 the whole Deccan suffered from a failure of the early rains; and distress was so widespread and serious that relief works, chiefly road construction, were opened in every District. In Nāsik, particularly, the price of grain rose more rapidly to famine level, owing to the reduction of the area under cereals caused by increased cotton cultivation; but in the end each District was equally afflicted by a calamity, the severity of which is to some extent proved by the fact that grain compensation allowances were required for all Government servants in receipt of a monthly salary less than Rs. 200. 1862.

The famine of 1876–7 was felt throughout the Deccan and Southern Marāthā Country, though less severely than in the adjoining tracts of Madras and Mysore. The same meteorological causes operated over all Southern India. The total rainfall of the year was everywhere deficient, but the disastrous effect upon agriculture was determined mainly by local variations. The harvest of 1875 had also been below the average, so that the pressure of high prices fell upon a population already impoverished. In 1876 the summer rains of the south-west monsoon, which commence in June, were scanty, and the autumn rains, upon which the table-land above the Ghāts is mainly dependent, failed altogether. The result was a general failure in the winter crops in the Presidency over an area estimated at 39,000 square miles, with a population of nearly six millions. Serious distress began in November, 1876, and lasted for about twelve months. In April, 1877, the number of people employed by Government on relief works was 287,000. In July of the same year the persons in receipt of gratuitous relief numbered 160,000. The District most affected was Bijāpur, bordering on the Nizām's Dominions, where those relieved formed 14 per cent. of the total population, and the severity of the local distress was intensified by the lack of roads and railways. But these figures convey but an inadequate idea of the general impoverishment produced by this disastrous year. The statistics of the Bombay mint show in a decisive manner how even the well-to-do portion of the population suffered. In the two years 1877 and 1878 the total value of silver ornaments and disused coin brought into the mint as bullion exceeded 250 lakhs, compared with only Rs. 40,000 in 1876. The Government endeavoured to provide work for the starving population; but notwithstanding the wages offered and the supplies of food brought into the country, the calamity proved beyond the power of administrative 1876–7.

control. The deaths in the two famine years 1877 and 1878 in the Bombay Presidency, excluding Sind, are estimated to have been 800,000 in excess of the usual number.

1896-7. After 1877 a period of nearly twenty years elapsed without the occurrence of any famine of serious dimensions. In 1896 the rain failed in the Deccan Districts and the East Carnatic, and severe distress followed. The total daily average number of persons in receipt of relief in these tracts, either employed on Government works or being fed in poorhouses or by village doles, during a period of fourteen months was 280,000, the maximum being 459,000 in September, 1897. The number of relief works open amounted to 180, and the expenditure incurred on relief was 146 lakhs, of which 128 lakhs was contributed by Government and the rest by local bodies and the Indian Famine Fund. The rainfall of the succeeding year was more ample but still inadequate; and relief measures had again to be resorted to, the resources of the people being severely taxed.

1899-1902. In 1899-1900 the rains failed in Gujarāt, the Deccan, and parts of the Carnatic, causing a famine of unprecedented severity. In British Districts alone the daily average number of persons in receipt of relief from September, 1899, to November, 1900, was 849,000, the maximum being 1,547,000 in July, 1900. The daily average from December, 1900, to October, 1901, was 291,000, and from November, 1901, to October, 1902, 192,000. The number of works open was 367 in 1899-1900, and 268 in the two following years; the total expenditure on relief measures exceeded 6 crores, while $2\frac{1}{4}$ crores of revenue was remitted. In Native States a daily average of 298,000 persons were relieved in 1899-1900, at a cost of 83 lakhs. This famine was marked by terrible mortality, the highest death-rate occurring in the Gujarāt Districts and States, where the people, long unaccustomed to suffer from scarcity, frequently failed to take advantage of relief measures until the progress of exhaustion had rendered it impossible to save their lives. The wild tribes in the forest tracts of Gujarāt, ignorantly distrustful of these measures, and opposed to all forms of regular work, died in numbers in the remoter jungles. Later on, when relief measures were making progress in public favour, virulent outbreaks of cholera slew thousands, and scattered the survivors beyond the reach of relief.

It is difficult to separate the deaths caused by disease from the results of privation, and estimates of mortality are again

complicated by the prevalence of bubonic plague in certain of the famine areas. It is, however, estimated by the Provincial Superintendent of the Census of 1901 that between 1896 and 1901 the Presidency lost 3,000,000 of its population, owing to the combined ravages of famine and plague. Of this loss one-third occurred in British territory and two-thirds in Native States, and the greater part of it must be attributed to famine.

In connexion with recent famines, it may be noted that the extension of the railway system of the Presidency has very largely reduced the difficulty of saving life, by providing for the transit of food-grains to the affected areas. In 1877, for instance, attempts made to import food into the Carnatic failed, owing to the difficulty of conveying grain from the coast by bullock-cart. In 1896–7 and in 1899–1900 the food-supply was everywhere adequate, though naturally costly. Incidentally this advantage has been accompanied by a lesser but inevitable evil: namely, the raising of prices to a level formerly unknown in the tracts whence food-grains are exported by the newly constructed means of communication. Another and more entirely satisfactory characteristic of recent famines has been the prompt recovery of the affected areas on the return of the normal rainfall. This happy result is to be attributed largely to the measures adopted by Government for facilitating the recommencement of agricultural operations. The loss of valuable stock has been minimized by transporting cattle to the grazing lands in the forests, or by distributing large quantities of fodder gathered in these forests throughout the affected tracts. Advances of money on a liberal scale have been made to enable the small landowner to purchase seed and cattle, without which his lands must have remained unsown. Large suspensions and remissions of the land revenue demand were granted throughout the famine area. Efforts were also made, by employing the relief workers on the construction of irrigation works, to provide against the consequences of rain failure in the future. Measures of this description are unfortunately limited by the unsuitability of much of the country most liable to famine to large and comprehensive schemes of irrigation. But the works constructed have been supplemented to some extent by the digging of numerous wells, for which loans were advanced to the cultivators. Many of these were completed in time to furnish a small grain or fodder crop to the owner during the period of the famine, and the others have enabled a useful addition to be

made to his crop out-turn ever since. Much special relief was afforded between 1899 and 1902 by the Indian Charitable Relief Fund, from which 57½ lakhs was given to deserving sufferers in the affected Districts of the Presidency.

Administration. Governor-in-Council. The government of the Presidency of Bombay is administered by a Governor-in-Council. This body consists of the Governor as President, and two members of the Indian Civil Service, all of whom are appointed by the Crown. The term of office for both Governor and Councillors is five years. With a view to diminish the pressure of business, each member of Council takes immediate charge of certain departments. Questions which present no special difficulty are finally disposed of by the member in charge of the department in which they occur. On more important questions, and on those involving the expenditure of any large sum of money, the opinion of a second member is sought; and should there be a difference of opinion, or should any case of peculiar difficulty or general public interest arise, the matter is settled according to the balance of opinion either as recorded by the different members, or after discussion at a meeting of the Council.

In matters before the Council in their judicial capacity, and in the making, repealing, and suspension of the ordinary rules of civil administration, the opinion of the majority is decisive; but in any matter essentially affecting the safety or tranquillity of British India, the Governor can act on his own discretion even against the opinion of his Councillors.

Secretariat. All papers connected with public business reach Government through the Secretariat, where they are submitted to the members in charge of the departments to which they belong. The Secretariat is divided into five main departments: namely, (*a*) the Revenue and Financial; (*b*) the Political, Judicial, Legislative, and Special; (*c*) the General, Educational, Marine, and Ecclesiastical; (*d*) Ordinary Public Works, including Irrigation; and (*e*) Railways; and each department has at its head a secretary, who is usually assisted by an under secretary and an assistant secretary. In departments (*a*), (*b*), and (*c*) the secretaries and under secretaries belong to the Indian Civil Service; in (*d*) and (*e*) they are Royal or Civil Engineers; group (*d*) being in charge of two joint secretaries, with an under secretary for irrigation matters. The senior of the three civilian secretaries to Government is entitled the Chief Secretary. The Separate department, which deals with the dispatch and receipt of correspondence from

the India Office, and is in charge of the Secretariat building, is under the Chief Secretary, assisted by the under secretary, Revenue and Financial department.

Under the Governor-in-Council, the Presidency is administered by four Commissioners—the Commissioner in Sind, who has special powers, and the Commissioners in charge of the Northern, Central, and Southern Divisions. Sind contains six Districts: namely, Karāchi, Hyderābād, Lārkāna, Sukkur, Thar and Pārkar, and Upper Sind Frontier, the first four of which are in charge of Collectors and the last two of Deputy-Commissioners. The Revenue Divisions of the rest of the Presidency contain the following Districts, each in charge of a Collector, who is generally an Indian Civilian, but may belong to the Statutory or the Provincial Service:— Divisions.

Northern Division.—Ahmadābād, Broach, Kaira, Pānch Mahāls, Surat, Thāna.

Central Division.—Poona, Sātāra, Sholāpur, Nāsik, Khāndesh (now East and West Khāndesh), Ahmadnagar.

Southern Division.—Belgaum, Dhārwār, Bijāpur, Kanara, Ratnāgiri, Kolāba.

The head-quarters of the Commissioner, Northern Division, are at Ahmadābād; the Commissioner, Central Division, resides at Poona, and the Commissioner, Southern Division, at Belgaum.

Each District has one or more Indian Civilians as Assistant Collectors in charge of subdivisions, and one or more Deputy-Collectors of the Provincial Service similarly employed. A Deputy-Collector is in charge of each District treasury.

A Collectorate contains an average of from eight to twelve *tālukas*, each consisting of 100 to 200 Government villages: that is to say, villages of which the whole revenues belong to the state. Each village has its regular complement of officers, some or all of whom are usually hereditary. The officers on whose services Government is mainly dependent are the *pātel*, who is the head of the village for both revenue and police purposes; the *kulkarni* or *talāti*, who is the clerk and accountant; the messenger; and the watchman. The *pātel* and *kulkarni* sometimes hold a certain quantity of rent-free land, but are now almost universally remunerated by a cash payment equivalent to a percentage on the collections. The messenger and watchman, and sometimes other village servants, hold land on special terms as regards assessment, and receive grain and other payments in kind from the villagers. The remaining village servants include the Villages.

carpenter, blacksmith, potter, barber, and others whose services are necessary to the community. A village is, for Government or social purposes, complete in itself, and, so to speak, independent of the outer world. But owing to the greater centralization and complexity of the system of government, its autonomy is now less than it was under native rule.

Tāluka, sub-division, &c.

Over each *tāluka* or group of villages there is an officer termed *māmlatdār*, whose monthly salary varies from Rs. 150 to Rs. 250. The *māmlatdār* is responsible for the treasury business of his *tāluka*; he has to see that the instalments are punctually paid by the several villages; that the village accounts are duly kept; that the occupants get their payments duly receipted; that the boundary marks are kept in repair; and, in general, to secure that the village officers do their work properly. He has also to look after the administration of the local funds, and is a subordinate magistrate. The *tāluka* is subdivided into groups of villages, each of which is under the immediate supervision of a subordinate of the *māmlatdār* termed 'circle-inspector.' The Assistant or Deputy-Collector placed in charge of a District subdivision, containing three or four *tālukas*, has to travel about them during seven months in the year, to satisfy himself by personal inspection that the revenue work is being properly done; during the rains he resides at the District head-quarters. The Collector and Magistrate is placed over the whole District, and has to travel for at least four months in the year. The Commissioners exercise a general superintendence and control over the revenue administration of their Divisions.

Native States.

The control of the Bombay Government over the Native States of the Presidency is exercised through Political Agents. The position and duties of the Agent vary very considerably in the different States, being governed by the terms of the original treaties, or by recent *sanads* or patents. In some instances, as in Cutch, the functions of the Agent are confined to the giving of advice and to the exercise of a general surveillance; in other cases he is invested with an actual share in the administration; while States whose rulers are minors—and the number of these is always large—are directly managed by Government officers. The characteristic feature of the Bombay Native States is the excessive number of petty principalities, such as those of the Rājput and Bhīl chieftains. The peninsula of Kāthiāwār alone contains no less than 193 separate States. The recognition of these innumerable jurisdictions is due to the circumstance that the early

Bombay administrators were induced to treat the *de facto* exercise of civil and criminal jurisdiction by a landholder as carrying with it a quasi-sovereign status. The rule of succession by primogeniture applies only to the larger principalities, and consequently the minor States are continually suffering disintegration.

The States may be conveniently divided into three classes. First, there are important States in each of which the British Government is represented by an Agent who corresponds with the Darbār, or State administration, and is a member of the Bombay Political service, specially appointed to the post. Second, groups of smaller States in charge of a Political Agent, who resides in a central station, and is also a member of the Bombay Political service. Third, isolated States in close proximity to British Districts, the Collector of which is *ex-officio* Agent for the State. According to this classification the States attached to the Bombay Presidency are as follows :—

Class I.—Kolhāpur, Sāvantvādi, and Cutch.

Class II.—Mahī Kāntha States, Pālanpur States, Kāthiāwār States, and Southern Marāthā Jāgīrs.

Class III.—Khairpur, Rewā Kāntha, Cambay, Dharampur, Bānsda, Sachīn, Jawhār, Janjīra, Surgāna, Akalkot, Bhor, Aundh, Phaltan, Savanūr, Jath, and the Bhīl States in Surat.

The Native States are either subordinate to other States or in direct relation with the British Government. Thus Kolhāpur has direct dealings with Government, while its feudatory, Kāgal, is in relation with the Kolhāpur Darbār. The status of the feudatories is usually guaranteed by Government. All classes are administered, subject to the orders of the chief, by the Darbār of ministers, who issue orders to the executive, usually through the chief minister or Dīwān. The powers of the chiefs are regulated by treaty or custom, and vary from authority to try all criminal offences not committed by British subjects, and complete civil authority, as in the case of the Mahārājā of Kolhāpur, to the mere right to collect revenue in a share of a village, without criminal or civil jurisdiction, as in the case of the petty chiefs of the Kāthiāwār peninsula. When the chief lacks the power to dispose of criminal or civil cases, they are dealt with by the Political Agent. Appeals from the judicial decisions of chiefs with large powers lie to the Governor-in-Council, and are not cognizable by the ordinary courts of justice established for British territory. With the object of providing a tribunal by which speedy justice

might be dispensed to the wild tribes inhabiting the border States of Gujarāt and Rājputāna, and to repress border raids, a system of Border Panchāyats was instituted in 1838, which subsequently (1876) developed into regular courts under two British officers, one of whom represents the Rājputāna State and the other the Bombay State concerned in the inquiry. The system still exists and the courts assemble as occasion requires.

Aden.

In Aden the local administration centres in the Resident, who is the General in command of the troops, and has three Political officers as Assistants in the former capacity.

Law and justice. Legislation.

The Legislative Council of the Presidency is composed of the members of the Executive Council, with the Advocate-General and twenty Additional Members nominated by the Governor, eight of them on the recommendation of—(1) the corporation of Bombay, (2) the municipal corporations of the Northern Division, (3) the District boards of the Southern Division, (4) the District boards of the Central Division, (5) the Sardārs of the Deccan, (6) the *jāgīrdārs* and *zamīndārs* of Sind, (7) the Chamber of Commerce, Bombay, and (8) the Senate of the Bombay University.

The non-official Additional Members of this Council have the privilege of recommending one member for a seat as an Additional Member in the Legislative Council of the Governor-General. The members of the Legislative Council avail themselves freely of the right to interpellate Government regarding matters of general administration, and to discuss the annual financial statement.

The chief legislative measures affecting Bombay which have been passed since 1880 by the Governor-General's Council are: The Indian Merchant Shipping Act (Act VII of 1880), the Bombay Revenue Jurisdiction Act (Act XV of 1880), the Indian Factories Act (Act XV of 1881), the Indian Trusts Act (Act II of 1882), extended to Bombay in 1891, the Land Improvement Loans Act (Act XIX of 1883), extended to Bombay in 1886, the Indian Steamships Act (Act VII of 1884), the Provincial Small Cause Courts Act (Act IX of 1887), the Land Acquisition Act (Act I of 1894), the Cotton Duties Act (Act II of 1896), the Sind Encumbered Estates Act (Act XX of 1896), and the Epidemic Diseases Act (Act III of 1897). Of the enactments passed by the Bombay Legislative Council during the same period the chief are: The Bombay Local Boards Act (Act I of 1882), the City of Bombay Municipal Act (Act IV of 1888), the Bombay Village

Sanitation Act (Act I of 1889), the Bombay Salt Act (Act II of 1890), the Bombay District Police Act (Act IV of 1890), the City of Bombay Improvement Act (Act IV of 1898), the Bombay District Municipal Act (Act III of 1901), the City of Bombay Police Act (Act IV of 1902), the Bombay Land Record-of-Rights Act (Act IV of 1903), the Bombay Motor-Vehicles Act (Act II of 1904), and the Bombay Court of Wards Act (Act II of 1905).

High Court.

The administration of justice throughout the Presidency proper is, under a statute of 1861 (Indian High Courts Act) and the letters patent of 1865, entrusted to the High Court, which has both ordinary and extraordinary civil and criminal jurisdiction, original in the City and Island of Bombay and appellate in the other Regulation Districts. It also exercises the functions of an insolvency court, and possesses the civil and criminal jurisdiction of an admiralty and vice-admiralty court in prize causes and other maritime questions arising in India. The Court consists of a Chief Justice (a barrister) and six puisne judges who are either Indian Civilians, barristers, or native lawyers.

In Sind the Court of the Judicial Commissioner (consisting of three judges, one of whom must be a barrister) is the highest court of civil and criminal appeal, and the High Court at Bombay has no jurisdiction over that province, except as regards a few special matters. The Judicial Commissioner's Court is a colonial court of admiralty, from which an appeal lies to a full bench of the same court and ultimately to His Majesty in Council.

Civil courts.

The lower civil courts are constituted under Act XIV of 1869, which defines their powers. In most cases the court of first instance is that of a Subordinate Judge of the first or second class according to the valuation of the suit. The court of first appeal is that of a District or Assistant Judge, or of a first-class Subordinate Judge with special powers. The jurisdiction of the District, Additional, and Assistant Judges is conterminous in each District. The Subordinate Judges are usually recruited from the ranks of the local pleaders, while the District and Assistant Judges are Indian or Statutory Civilians or members of the Provincial Service. A Subordinate Judge of the second class has original jurisdiction in suits of less than Rs. 5,000 in value, but no appellate powers; while a Subordinate Judge of the first class has jurisdiction in all original civil suits, except those in which Government is a party. The latter may be invested with appellate jurisdiction

and with the summary powers of a Small Cause Court Judge for the trial of suits not exceeding Rs. 1,000 in value. An Assistant Judge may try such original suits of less than Rs. 10,000 in value as the District Judge refers to him, and may be invested with appellate jurisdiction, in which case his powers are the same as those of a District Judge. The District Judge exercises a general control over all courts within his charge, and refers such suits as he deems proper to the Assistant Judge. In certain parts of the Presidency the services of an Additional Judge are employed. This officer, with the title of Assistant Judge, has all the powers of a District Judge in civil matters, and nearly all the administrative powers. An appeal from the decision of a Subordinate or Assistant Judge in cases exceeding Rs. 5,000 in value, and from the decision of a District Judge in all original suits, lies to the High Court. Any Subordinate Judge can be invested with certain powers as regards small debts; and special Small Cause Courts exist at Bombay, Ahmadābād, Nadiād, Broach, Surat, Poona, and Karāchi. The Dekkhan Agriculturists' Relief Act is administered in the Presidency proper by a Special Judge and two first-class Subordinate Judges, with the aid of a number of Village Munsifs and conciliators.

In Sind the judicial system nearly resembles that of the Regulation portion of the Presidency. In Aden and its dependencies the Resident has rather more extensive powers than a District and Sessions Judge, but his decisions are in certain cases subject to revision by the High Court at Bombay.

Māmlatdārs have, under Bombay Act III of 1876, jurisdiction in suits regarding immediate possession of immovable property. Their decisions are subject to revision by the High Court.

Criminal courts.

District and Assistant Judges, under the title of Sessions Judges and Assistant Sessions Judges, exercise criminal jurisdiction throughout the Presidency. But original criminal work is chiefly disposed of by the executive District officers, who, in addition to their revenue duties, are invested with magisterial powers under the Code of Criminal Procedure. The total number of magistrates of all classes (inclusive of 242 honorary magistrates) in 1904 was 1,128, of whom 24 were District magistrates, 4 Presidency magistrates, 311 magistrates of the first class, 259 magistrates of the second class, and 288 magistrates of the third class. Under the general title of Courts of Sessions three grades of officers are included: the Sessions Judge, who is the District Judge; the Additional Sessions

Judge, who is the Assistant Judge with full powers; and the Assistant Sessions Judge. Whereas the Sessions Judge can try any offence and pass any legal sentence, subject in the case of a capital sentence to confirmation by the High Court, the Additional Sessions Judge can try only such cases as he is empowered by the Government to try or which are made over to him by the Sessions Judge. The Assistant Sessions Judge can try only such cases as the Government may direct or as are made over to him by the general or special order of the Sessions Judge. A sentence passed by him may not exceed imprisonment or transportation for seven years. The jurisdiction of the three classes of Judges is conterminous in each District of the Presidency.

Particulars of civil suits and criminal cases instituted before these different courts are given in the following tables:—

STATISTICS OF CIVIL JUSTICE IN BOMBAY PRESIDENCY

Classes of suits.	Average for ten years ending 1890.	Average for ten years ending 1900.	1901.	1904.
Suits for money and movable property	151,424	160,369	147,815	120,227
Title and other suits . .	15,510	31,289	38,593	40,276
Total	166,934	191,658	186,408	160,503*

* Besides these, there were 4,608 suits under the Dekkhan Agriculturists' Relief Act.

STATISTICS OF CRIMINAL JUSTICE IN BOMBAY PRESIDENCY

	Average for ten years ending 1890.	Average for ten years ending 1900.	1901.	1904.	Percentage of convictions, 1904.
Number of persons tried:					
(*a*) For offences against person and property .	86,181	110,431	91,088	94,272	19
(*b*) For other offences against the Indian Penal Code . .	17,005	25,076	22,265	26,578	16
(*c*) For offences against special and local laws.	44,318	127,670	145,971	135,996	64
Total	147,504	263,177	259,324	256,846	42

Civil suits tend to increase steadily, except in years of famine or scarcity. Thar and Pārkar in Sind and Sātāra in the Deccan are remarkable for litigation, whereas the fewest suits

in proportion to the population are instituted in Bombay City and in the Gujarāt Districts. Criminal offences are mainly petty assaults and thefts. In famine seasons gang robberies or 'dacoities' are doubled, and thefts show a similar increase—the natural outcome of widespread privation. Convictions are obtained only in less than half the cases brought into court—an eloquent indication of the difficulties under which the courts labour in endeavouring to arrive at a conclusion regarding the guilt of the accused. It is probable that the prisoner is more often acquitted on account of the unsatisfactory demeanour of the witnesses than because the charge is untrue.

Registration.

Documents regarding rights in immovable property, and those dealing with movable property of over a certain value, are required to be registered. Sub-registrars are maintained in *tāluka* head-quarters for this purpose, and are bound to require evidence of execution before proceeding to register. Collectors are *ex-officio* Registrars for their Districts, and the department is controlled by the Inspector-General of Registration. The number of offices and of documents registered in the Presidency, excluding Native States, but including Aden, Deesa, and Bhūj cantonments, was as follows: offices (in 1880) 255, (1891) 224, (1901) 257, (1903) 261; average number of documents registered (in 1881–90) 111,441, (1891–1900) 186,476, (1900–1) 199,156, and (1903–4) 161,593.

Finance.

The financial system of the Marāthās was largely the result of the historical events leading to their political ascendancy. Thus the revenue raised in the *svarāj*, or area in which their sovereignty was unchallenged, was wholly theirs. Elsewhere the revenue was divided between them and the Mughals, or later, between them and the Nizām, though a *sardeshmukhi* or overlordship charge of 10 per cent. was levied and retained by the Marāthās. The revenue was raised almost entirely from the land assessment and special cesses known as *paltis*, such as a butter tax, a grain and grass tax, a house tax, and a tax on female buffaloes. Broadly speaking, the sum collected was divided into two portions: the *bābti* or chief's share, and the *mokāsa* or share given away by the chief, three parts of the revenue being treated as *bābti* and one part as *mokāsa*. Thus a Marāthā budget for outlying territory would roughly have been as follows:—

Sardeshmukhi		10 per cent.
Share due to Mughals or Nizām		45 ,,
Marāthā share—	*Bābti* $33\frac{3}{4}$ *Mokāsa* $11\frac{1}{4}$	45 ,,
	Total	100

But the division of the revenues was in practice greatly complicated by special assignments made to the great hereditary officers, such as the Pant Sachiv. The total demand was never realized, and the receipts varied greatly from year to year.

Under British rule, up to the year 1870 there was but one common purse for all India, of which the Government of India held the strings. Since then, the distribution of revenue and expenditure between the Supreme and Provincial Governments has been regulated by the Provincial settlement system, a description of which will be found in Vol. IV., chap. vi. In 1871-2 an allotment was made to the Government of Bombay for certain services transferred to its control, such as police, education, jails, registration, equal to the estimates for those services for 1870-1, less a lump deduction of 6·6 lakhs necessitated by financial exigencies. This settlement was accompanied by a general promise that, except in the event of war, famine, or other severe financial exigency, the assignments would not be reduced. Settlement of 1871.

In 1877 the system was expanded by assigning to the Local Government a proportionate share in certain growing heads of revenue, from which it was to meet the expenditure on the ordinary Provincial services. These included land revenue, 66 lakhs; excise, 40; stamps, 45; law and justice, 3; and other items amounting to 4 lakhs. The result was to raise the income of the Local Government by about 153 lakhs per annum. This second settlement was fixed for five years. It was seriously disturbed by the famine of 1877, and could not in consequence be strictly adhered to. The Provincial revenue and expenditure during this period averaged respectively 347 and 336 lakhs. 1877.

In 1882 a third quinquennial settlement was arranged, the terms of which were far more favourable to the Local Government than in the two previous cases. The principle adopted was to extend the interest of the Provincial authorities in the development of the revenue by a system of sharing several of the old and some new heads, instead of allotting certain heads entirely to Provincial funds. Thus, it was arranged that the Bombay Government should receive half of the revenues under forest, excise, assessed taxes, stamps, and registration, and should receive in their entirety the proceeds of local rates, minor departments, law and justice, marine, police, education, medical, stationery and printing, miscellaneous receipts under customs and salt, and certain items under interest, pensions, mis- 1882.

cellaneous, and public works. The Local Government was to look for no special aid in future from Imperial sources, except in the case of severe famine, and then only within certain definite limits; and, on the other hand, the Supreme Government was to make no demand on the Provincial authorities except in the case of abnormal disaster. This settlement opened with a credit balance of 29 lakhs, and, after contributing 20 lakhs to make good deficiencies in Imperial accounts, closed with a balance of nearly 55 lakhs. The revenue and expenditure during this period averaged respectively $380\frac{1}{2}$ and $380\frac{2}{3}$ lakhs.

1887. In the fourth settlement (1887) the principle of dividing receipts as well as expenditure under certain heads was extended, and some changes were made in the proportion of the shares. The estimates of the receipts thus provincialized fell short of the expenditure by nearly 82 lakhs, which was met by an assignment from the Imperial share of the land revenue receipts. The closing Provincial balance under this settlement was about 40 lakhs. The revenue and expenditure during this period averaged respectively $390\frac{1}{2}$ and $393\frac{1}{3}$ lakhs.

1892. The fifth settlement (1892) was marked by some slight changes in the classification of revenue and by the cessation of all inter-Provincial adjustments. The special feature of this settlement was that it was a consolidated one, intended to secure to the Local Government a total sum for all heads taken collectively instead of a contract figure for each major head of receipts. The revenue and expenditure during this period averaged respectively 411 and 416 lakhs. In 1897, when the settlement came to a close, the balance had fallen to 18 lakhs. The decrease was caused by the demands made for special expenditure in connexion with famine and plague. Owing to the disturbance in Provincial finance due to continued famine and plague, the Government of India limited the 1897 settlement to a period of one year. Towards the end of 1898, when the extension of this settlement was discussed, it was found that the Presidency had not recovered from the effects of the famine of 1896–7; and it was decided to continue its contract with the Government of India on the lines of the fifth settlement (1892–7), the fixed assignment being curtailed by Rs. 94,000 on account of some special reductions in Provincial services. The year 1898–9 opened with no balance, and it was therefore directed that the Provincial share of special famine arrears of land revenue should remain unspent until the minimum balance of 20 lakhs had been restored. The

Subsequent arrangements.

occurrence of a still more severe famine in 1899–1900 entirely upset these arrangements, and further grants-in-aid by the Supreme Government became necessary. On March 31, 1902, the sixth settlement expired; but, for the reasons already given, it had never amounted to more than an arrangement of accounts. The state of affairs at the close rendered it difficult to fix standards for either revenue or expenditure; and, mainly for this reason, it was decided to continue the former Provincial arrangements till March 31, 1905. Imperial revenues bore all direct famine expenditure during the period 1897–1903, excepting a sum of 2·52 lakhs in 1898–9, which was debited to Provincial revenues. The details of this expenditure were, in thousands of rupees, as follows:—

1897–8	94,26
1899–1900	1,15,43
1900–1	2,84,02
1901–2	77,63
1902–3	39,99
Total	6,11,33

The chief features of the new settlement, which came into force on April 1, 1905, are that the period of its duration is not fixed, an annual assignment of Rs. 42,77,000 is made to Provincial revenues under the Land Revenue head, and the proportions between Provincial and Imperial accounts of the shared heads of revenue and expenditure have been materially changed in favour of the Bombay Government. That is to say, the Provincial share of the revenue has been raised to the whole under the head Registration, and to one-half under the remaining divided heads. On the expenditure side the proportions are the same, except that Land Revenue is wholly Provincial. The scope of the settlement has been enlarged by the provincialization of one-half of the revenue and expenditure under Irrigation.

Tables VI and VII on pp. 139–40 show the chief sources of revenue and the chief heads of expenditure between 1880 and 1904.

The table on the next page shows, in thousands of rupees, the gross Provincial receipts and expenditure, as well as the opening and closing balances for the years 1897–8 to 1903–4.

Land revenue. General method of assessment.

In the Bombay Presidency (outside Sind) the land revenue system is with few exceptions *ryotwāri*: that is to say, a system of settlement with the ryots or cultivators of small holdings, whose revenue payments are fixed after careful measurement and classification of the land in their possession. The

settlement, once made, is in force for a period of thirty years, during which the ryot is at liberty to alienate his occupancy right; but he cannot be dispossessed by Government so long as he regularly pays the several instalments of land revenue. At the conclusion of the term of settlement, the revenue payable is liable to revision; but the tenant has a continued

	Opening balance.	Gross receipts.	Gross expenditure.	Closing balance.
1897-8 . .	17,97	4,29,01	4,41,98	5,00
1898-9 . .	5,00	4,61,62	4,51,58	15,04
1899-1900 .	15,04	4,25,76	4,40,81	...
1900-1 . .	...	4,52,20	4,52,20	...
1901-2 . .	...	5,15,36	4,57,13	58,23
1902-3 . .	58,23	4,68,85	4,93,08	34,00
1903-4 . .	34,00	4,61,86	4,63,09	32,77

right of occupancy provided that he agrees to accept the new terms. His position is thus more secure than it was before the advent of the British Government. In earlier times, it is true, the hereditary occupant, or *mirāsdār*, held land on terms which precluded its forfeiture on failure to pay the revenue demand, unless he absented himself for a term of over thirty years. But, on the other hand, he was liable to extra and arbitrary impositions, and was responsible for the default of neighbouring *mirāsdārs*, while his lien on the land was also conditional on his reimbursing all arrears due and expenses incurred during default. The original settlement of the revenue demand from each occupant made by the British Government was based on the investigations of a Survey department, specially organized for this work. After measuring and mapping every holding, the Survey officers proceeded to classify the fields according to depth and quality of soil, their situation, and natural defects, such as liability to inundation and the like. In this manner the field was placed in a class corresponding to a certain 'anna valuation' or fractional share of the maximum rates calculated in terms of 16. Subsequently villages were grouped into blocks with reference to their nearness to markets, to means of communication, and other economic conditions. The maximum rates for the block were then fixed with reference to these conditions, and to average prices. A field bearing a 12-anna valuation would thus, if situated in a village with a maximum rate of Rs. 4, bear an assessment of Rs. 3 per acre.

Resulting position of the *ryot*.

It will be observed that in this manner the ryot is called upon to pay a yearly revenue in proportion to the probable

income that he can derive from his holding. The advantages offered to him by the system are security of tenure, power of alienation, either temporarily by mortgage or permanently by sale, and a fixed annual demand, subject to revision only at the expiry of the settlement period. The disadvantages are that the revenue is payable in cash, which may involve forced sales of produce; that, being fixed on the average capacity of the land, it is payable, in theory at least, whether the crops are good, bad, or a total failure; and that, in the case of thriftless occupants, who are the majority, the power to alienate the holding, combined with fixity of assessment, has in many instances facilitated reckless borrowing, ultimately reducing the occupant to a mere serf of the money-lender. In other words, the underlying assumption involved in the original survey settlement of Bombay was that, with a moderate and fixed demand of revenue, combined with permanency of tenure, the occupant would be encouraged to thrift and disposed to make improvements. Experience shows that these very features of the settlement have stimulated a natural disposition to reckless borrowing on the part of the occupant, while offering to capitalists inducements to make advances that never before existed. Recent inquiries tend to the conclusion that, as a result, in some parts of the Presidency nearly three-fourths of the ryots have mortgaged their holdings. Legitimate borrowing by an agriculturist for the development of his land is a process which Government may view with equanimity. Reckless recourse to the money-lender for sums to be dissipated on marriages or other forms of domestic expenditure tends to substitute for the state a landlord concerned only in extracting from the cultivator the full measure of his dues, however excessive the share claimed may be when compared to the total produce of the land. Under such landlords the state of the cultivating classes may not inconceivably constitute a grave political embarrassment.

Financial results of the settlement.

The original survey settlement of Bombay commenced in 1835 and was concluded in 1882, except in North Kanara and Ratnāgiri, which were completed respectively in 1891 and 1893. Survey operations are now in progress in the Akhrāni *pargana*, a wild and isolated portion of Khāndesh District. The settlement imposed a total revenue demand of 2·7 crores on the twenty-four Districts of the Presidency. The first revision settlement raised this sum by 22 per cent., the revised demand amounting to 3·3 crores. In all but three cases the District revenue was increased, the maximum increases being

50 and 46 per cent. in the case of North Kanara and Thar and Pārkar. For the last thirty years it has been an accepted principle of revision that in no circumstances shall the increase of revenue exceed 100 per cent. on an individual holding, 66 per cent. on a village, or 33 per cent. on a group of villages. Improvements effected by occupants in their holdings from private capital are exempt from taxation at a revision settlement. The special Survey department, having completed its work, has been abolished, and revisions of the revenue settlements are now entrusted to the Assistant or Deputy-Collectors in charge of the District subdivision.

Settlement rates.

The maximum and minimum rates per acre of assessment on 'dry-crop' and garden land in the various Divisions of the Presidency, under the revised survey settlement, are—Northern Division: 'dry crop,' 6½ annas to Rs. 8-13; garden land, 11 annas to Rs. 16-9; Central Division: 'dry crop,' 3 annas to Rs. 2-11; garden land, 10 annas to Rs. 14-14; Southern Division: 'dry crop,' 1 anna to Rs. 3-4; garden land, 8 annas to Rs. 14-13. In Sind the rates vary from R. 1 to Rs. 6-8 per acre. When land held under the survey settlement is sublet, the rent paid by the tenant varies from two to seven times the Government assessment. In cases of sales, the prices realized average about twenty-five times the assessment, and in some cases are as high as fifty times that sum. It is a noticeable fact that twenty times the assessment of the land will be advanced to the occupant on a mortgage-deed, whereas, if history is to be credited, land would not sell for more than two or three years' purchase, and could not be mortgaged for more than half the gross yearly produce, before the days of British government.

Special tenures.

Besides the survey or *ryotwārī* tenure just described, the chief forms of tenure in the Bombay Presidency are known as *tālukdāri*, *mehwāsi*, *udhad jamābandi*, *khoti*, *izāfat*, and revenue-free lands.

The *tālukdāri* tenure is found in Gujarāt, principally in Ahmadābād District. *Tālukdārs* are absolute proprietors of their respective estates, subject to the payment of a Government demand, periodically revised. They do not cultivate the land, but are sharers in its profits, with power to mortgage their shares. Permanent alienation requires Government sanction. These landowners levy rent from their tenants, either by *bhāgbatai*, i.e. taking a share of the crops, or by *bighoti*, i.e. a fixed rate per acre. The *mehwāsi* tenure, also found in Gujarāt, is a system of paying revenue in a lump sum

for the village, the amount being fixed at the discretion of the Collector. The payments are made by joint owners of the villages, who are descendants of Kolī or Rājput chiefs, formerly subject in most cases to tribute. *Udhad jamābandi* is a fixed assessment, not liable to revision, on villages, or groups of villages. The *khoti* tenure of the Konkan consists in the holding of village lands by families, who make an annual agreement with Government, and have the right to lease out lands on their own terms. They pay a lump assessment fixed on all the village lands by the Survey department, which is liable to revision. *Izāfat* tenure has arisen from the holdings of hereditary local officers, whose services are no longer demanded but whose holdings pay the full revenue demand, subject to certain concessions. *Ināms, jāgīrs*, &c., are tenures, wholly or partly free from assessment, of land allotted for services in connexion with the state, temples, &c. The distribution of the lands of the Presidency among the different forms of tenure in 1903-4 was as follows: *ryotwāri*, or survey tenure, 1,392,740 holdings; *tālukdāri*, 497; *mehwāsi*, 62; *udhad jamābandi*, 95; *khoti*, 3,684; *izāfat*, 30; *ināms, jāgīrs*, &c., 2,199. In Sind land is held on the irrigational settlement, based on the mode of irrigation adopted. The occupants are liable for the full assessment on each survey number when cultivated, and fallows are assessed once in five years. The land is mostly held by *zamīndārs* or large landholders. There are special forms of tenure in Bombay Island unknown throughout the rest of the Presidency, which are described in the article on BOMBAY CITY.

The land revenue administration of the Presidency is regulated by Bombay Act V of 1879 and the rules passed thereunder.

Land revenue under the Marāthās.

It is not easy to arrive at any estimate of the land revenue raised from the area of the Presidency before British rule, for the accounts kept by the Peshwās were very incomplete, and the records which have been preserved are fragmentary. The practice was to entrust the collection of the revenue to farmers (or *ijāradārs*); a certain maximum assessment known as the *kamāl* was imposed on each village, and the government realized from the farmer as large a proportion of the *kamāl* as it was able to obtain. At harvest time a division of the crops (*bhāgbatai*) was made, and the farmer took from the peasant the government share, which varied from one-third to one-half, after deducting the cost of cultivation. The farmer received as his profit the balance between his collections from the cultivator and his payments to the Peshwā. In bad

seasons extensive remissions appear to have been made to the farmers, and may have reached the cultivators. In many villages the *kamāl* has been found to be twice as high as the assessment now levied under the survey settlement. In spite of the enormous increase in the area now cultivated, it is probable that the total assessment now raised in the Presidency is far lower than the value of the contributions extracted from the villagers under the Marāthā system. Further, it was customary to supplement the land revenue demand by cesses on houses and trades, and for special objects such as the *ghās-dāna* (expenditure on grass and grain). All such cesses have been abolished by the British Government; their only counterpart being a rural cess of one anna in the rupee for the maintenance of roads and schools.

Remissions under the present system.

It has already been observed that the original survey assessment was intended to be levied in seasons good or bad, or even of total crop failure. Numerous experiments tend to prove that the demand averages about 8 to 12 per cent. on the gross out-turn from the land. The large profit made by the cultivator in a good year was theoretically expected to cover the revenue demand when the season was bad. As a matter of fact, extensive remissions have been granted during famines or other natural calamities; but hitherto the burden of proving incapacity to meet the revenue demand has been imposed upon the occupant, the dues being collected even in famine tracts unless the occupant can satisfy the authorities of his inability to pay. Apart from the reasons already given, the justification for this course lay in the indebtedness of the cultivator. It was argued that wholesale remissions would chiefly benefit wealthy capitalists, who stood in no need of relief. But, owing to the recent succession of unfavourable seasons, great practical difficulties arose in discriminating the private circumstances of individuals; and, by a change of system introduced in 1907, remissions are in future to be determined solely by the failure of crops and the depressed condition of agriculture in definite tracts.

Restrictions on the transfer of land.

Two important enactments have a special bearing on the land revenue policy of the Bombay Government. In 1879 the Dekkhan Agriculturists' Relief Act was passed to cope with agrarian discontent in four Deccan Districts—Poona, Sātāra, Sholāpur, and Ahmadnagar. The Act provided for the appointment of a special judge and numerous conciliators, who were empowered to investigate mortgages and similar alienations of land, to revise the terms of the contract, and to

arrange for an equitable settlement of claims, with a view to restoring the original rights of the occupant. The agrarian agitation which led to this measure being passed has not since recurred, but the Act is held to have led to an increase in sales of land in the Districts to which it applies. The Bombay Land Revenue Code Amendment Act of 1901 introduced some changes in the law regarding the grant of survey settlement occupancies, the Collector being empowered, after forfeiting land on which arrears of revenue were due, to grant it free of all incumbrances to an occupant on condition that it should not be mortgaged or otherwise alienated. Infringement of these conditions entails forfeiture of the holding. The object of this amendment was to restrict alienations. Its operation has not so far been sufficiently extensive to justify any conclusion regarding its probable results.

Miscellaneous revenue. Opium duty.

No opium is grown in the Bombay Presidency. Revenue is raised from this drug by means of a duty payable on importation or on issue from the Government dépôt, supplemented by fees for the right of vend. Opium intended for local consumption pays a duty of Rs. 700 per chest of 140¼ lb. A regular export of opium from Bombay to China has existed for many years. The duty on such opium was raised from Rs. 500 to Rs. 600 per chest in 1904. The average volume of this trade is 25,000 chests per annum. The annual local consumption of the Presidency is about 550 chests, equal to 0·13 tola per head of population. During recent years the volume of trade in opium and the duty raised therefrom has been as follows:—

Imports in	Chests.	Duty in thousands of rupees.
1880 (ending August)	38,541	2,70,05
1890 (ending August)	30,079	1,80,69
1900 (ending August)	21,638	1,08,36
1902–3 (ending March, for eight months)	15,211	76,28
1903–4 (ending March, for twelve months)	27,498	1,38,32

The opium to which these figures refer is nearly all grown in Mālwā and imported into the Presidency by rail; a small quantity is also raised in the Native State of Baroda. The 'opium' revenue proper consists only of the duty on exported opium; the duty and the receipts from local consumption are credited to 'excise.' The local transport and sale of opium is permissible only under a licence, and the amount which a private individual may possess or carry on his person is strictly

limited. There is a central opium warehouse in Bombay City. Elsewhere opium is stored in, and issued from, the Government treasuries

Vend fees.

The retail vend arrangements fall under two classes: (1) The 'selection farming' system, which prevails in the Districts of Ahmadābād, Kaira, Pānch Mahāls, Broach, Surat, Poona, Sholāpur, Ahmadnagar, and Nāsik, by which the monopoly of retail vend for a District, at shops licensed by the Collector, is granted year by year to a farmer selected by Government. The farmer has to contribute to the cost of the Government preventive establishments, but otherwise pays nothing for his privilege over and above the duty on the opium he sells. Maximum and minimum prices are prescribed in his licence. He may procure his supply direct from Mālwā, or from the opium warehouse at Bombay, or from local Government dépôts. (2) In the Districts of Khāndesh, Bijāpur, Belgaum, Dhārwār, Kanara, Ratnāgiri, Sātāra, Thāna, Kolāba, and in the City and Island of Bombay, at Aden, and in the Baroda cantonment, the 'licence fee' system is in force. Under this system the right of retail vend, either in single shops, or throughout a *tāluka*, or an entire District, is disposed of by auction, the sum paid being in addition to the duty on issues. The licensee must procure his supplies from a Government dépôt, and is bound to sell subject to fixed minimum and maximum prices.

The control of the Opium department in the Presidency proper is in the hands of the Commissioner of Customs, and centres in the Collector of each District, assisted by his ordinary establishment and a staff of opium police. In Sind the control is vested in the Commissioner.

Arrangements in Native States.

Agreements are in force with all Native chiefs in the Presidency to secure their co-operation in stopping contraband traffic. Under these agreements the cultivation of the poppy is prohibited in the Bombay States, and the chiefs are required to supply themselves with opium from a British dépôt, by purchase wholesale in the Bombay market, or by direct importation from Mālwā under pass, and to retail it to their subjects at prices not lower than the retail prices in British Districts. In return for these undertakings the States are allowed a refund of either the whole or a part of the duty. A few of the States in Mahī Kāntha, Rewā Kāntha, and Pālanpur have been allowed annual compensation for the loss of transit duties.

Salt.

Salt is the subject of Government control in India, to enable

the tax of R. 1 per maund of 82 lb. to be realized[1]. The salt revenue is raised by the sale of Government salt, by the levy of duty on imports, by leasing out private salt-works, and by selling salt on special terms for fish-curing. In the Bombay Presidency proper about 9,000,000 maunds of salt are manufactured yearly, and there is also an import of some 300,000 maunds. The gross revenue derived from taxing this production is about 2 crores, and the consumption amounts to nearly 3,000,000 maunds or about 9 lb. per head of the population.

The long line of sea-coast which the Presidency possesses offers special facilities for the manufacture of salt. The chief centres of production are at Khārāghoda on the Rann of Cutch, where salt is produced from brine under Government management, and at Dharasna near Bulsar, Mātunga in Bombay, Sānikatta in North Kanara, and similar factories, some owned by Government and some held by private individuals, where salt is manufactured in pans from sea-water by evaporation.

An extensive import of salt amounting to about 250,000 maunds annually takes place from Portuguese territory. It is manufactured near Panjim, and passes into British territory at Castle Rock by the West of India Portuguese Railway. Small imports by pack-bullock are also registered along the numerous *ghāt* roads that are too steep for cart traffic. The following statistics show the progress in the production and consumption of salt during the last twenty-four years in the Bombay Presidency, including Sind:—

	Salt delivered from salt-works.	Salt imported.*	Salt consumed.	Gross revenue from salt.	Average consumption per head.
	Maunds.	Maunds.	Maunds.	Thousands of rupees.	lb.
1880–1	6,358,517	26,536	2,670,657	1,50,56	9·12
1890–1	8,852,045	13,482	2,978,667	2,16,80	8.83
1900–1	9,514,462	319,495	3,173,089	2,34,06	9·97
1903–4	9,008,878	293,580	2,965,946	1,86,77†	9·03

* The imports of salt in 1881 and 1891 do not include Goa salt, the special duty having been in force in those years.
† These figures exclude Aden but include certain miscellaneous items which are credited to other heads in Table VI on p. 139.

For the protection of the salt revenue, and for the collection of the duty on manufactured or imported salt, a staff of

[1] The tax was reduced from Rs. 2½ per maund to Rs. 2 in 1903, to Rs. 1½ in 1905, and to its present rate in 1907.

1 Collector, 10 Assistant Collectors, and 11 Deputy-Collectors is maintained, who are also responsible for the control of the customs outside the ports of Bombay and Karāchi. This department is subordinate to the Commissioner of Customs, Salt, Opium, and Abkāri. No salt may be manufactured, imported, transported, or exported without a permit from the Salt department. Breaches of the law under this head are punishable with fine and imprisonment. The salt not consumed in the Presidency is exported, after levy of duty, to the Madras Districts, Hyderābād, or Calcutta, or issued free of duty to the Native States of Janjīra, Pātri, Jhinjhūvāda, and Rādhanpur, so long as these States agree to prohibit the manufacture of salt within their own borders. Small quantities of salt are also issued at special rates for use in recognized fish-curing yards, of which there are 15 in North Kanara and 14 in Ratnāgiri. The quantity of fish cured annually amounts to about 184,000 maunds.

The statistics of salt production and consumption in Sind in 1903–4 were: delivered, 275,000 maunds; imported, 12,725 maunds; consumed, 287,000 maunds; gross revenue, 6¼ lakhs; average consumption per head, 7·37 lb. There is one fish-curing yard in Sind, curing annually about 5,000 maunds of fish.

Excise. Sources of revenue.

The excise revenue is derived from duties, taxes, or fees levied on the manufacture and sale of country liquor, including toddy; the manufacture and sale of country liquors excised at rates leviable under the Indian Tariff Act; the sale of imported foreign liquors; the manufacture and sale of intoxicating drugs other than opium as defined in the Abkāri Act; the local consumption of opium.

Country liquor.

The revenue from country liquor, which forms by far the most important of these items, is obtained by—

(*a*) 'The still-head duty, central distillery, and minimum guarantee system.'—This system prevails everywhere except in the City and Island of Bombay, the cantonment of Deesa, and the Districts of Thāna, Kolāba, Ratnāgiri, North Kanara (coast *tālukas*), Belgaum, Sātāra, Poona, Ahmadnagar, Nāsik, and Khāndesh. The exclusive privilege of manufacture and sale of country liquor in each District to which the system applies is farmed out to a contractor, who manufactures the spirit at a central distillery and pays a fixed still-head duty on passing it out for sale in his shops. The contractor pays nothing for the right of vend, but he has to furnish a 'minimum guarantee,' that is, he undertakes that Government shall

receive not less than a fixed sum each year on account of still-head duty on liquor issued from the distillery; and he has thus a direct interest in the suppression of illicit distillation, and in the supply to the public from the central distillery of the quantity of liquor required for normal consumption. He is bound to sell spirit of authorized strengths only and within certain maximum prices prescribed. The rates of still-head duty varied in 1903–4 from 12 annas to Rs. 3–10 per gallon of spirit of 25° under proof, corresponding respectively to R. 1 and Rs. 4–13–4 per proof gallon, and from 6 annas to Rs. 1–14 per gallon of spirit of 60° under proof.

(*b*) 'The public or private distillery still-head duty and licence fee system.'—Under this system, which obtains only in the City and Island of Bombay, the manufacture of country spirit is separated from sale and there is no monopoly of either. The number of shops for the sale of country spirit is fixed, and the vend licences are disposed of either by auction or on payment of fees assessed periodically by the Collector on the basis of actual sales. The vendors are at liberty to procure their liquor, on payment of the prescribed rates of still-head duty, from any of the private spirit distilleries at Uran or from the public toddy spirit distillery at Dādar. There are no restrictions in regard to maximum price. The rates of duty vary from Rs. 1–1–10 per gallon of toddy spirit of 60° under proof to Rs. 2–1–6 per gallon of 25° under proof. The duty per gallon of Uran spirit of any strength up to 10 under proof is Rs. 4.

A system in force in Thāna, Kolāba, and Ratnāgiri, and in the coast *tālukas* of North Kanara District may be briefly described as a combination of these two systems. The rates of duty vary in different tracts from Rs. 2–5–4 to Rs. 3–8 per proof gallon of *mahuā* spirit, and from R. 0–11–1 to Rs. 2–2–8 on toddy spirit.

(*c*) 'Contract distillery and separate shop system.'—This system has lately been introduced in the Districts of Belgaum, Poona, Ahmadnagar, Nāsik, Khāndesh, and Sātāra. Its main features are that the right of manufacture is separated from that of retail vend; the right of manufacture of spirit of specified strength at the Government central distilleries or at private distilleries, and of supply to retail vendors, is assigned on competitive tender; and the right of retail vend, subject to the purchased rates of duty, is put up to auction by shops separately, or by groups of shops, or by *tālukas*. The rates of duty in 1903–4 varied from Rs. 3–10 in Sātāra to Rs. 4

in Poona, corresponding respectively to Rs. 4-13-4 and Rs. 5-5-4 per proof gallon.

(*d*) 'Contract distillery, separate shop, and minimum guaranteed revenue system.'—Under this system, which was introduced into Khāndesh in 1903 and subsequently in Nāsik, the privilege of manufacturing spirit and supplying it to retail vendors is assigned to tenderers offering to supply spirit of the sanctioned strengths at the lowest rates, while the right of retail vend in shops is disposed of by a system of tenders of minimum guarantee of duty. The rates of duty vary from 12 annas to Rs. 2 per gallon of 25° under proof, corresponding to R. 1 and Rs. 2-10-8 per proof gallon, and from 6 annas to R. 1 per gallon of 60° under proof.

(*e*) 'The lump-sum farming system.'—Under this system, which obtains only in the cantonment of Deesa, the right to import spirit from the town of Deesa, in Pālanpur territory, and to sell it at one shop in the cantonment, is sold by auction every year. No still-head duty is charged under this system.

In 1903-4 the average incidence of *ābkāri* taxation was about 10 annas, and the consumption of country liquor 8 drams per head of population. The average revenue realized was Rs. 3-11-9 per proof gallon, of which Rs. 3-3-8 represents still-head duty. The retail price of country liquor ranged from Rs. 1-2 per gallon upwards, according to strength.

Toddy.

Toddy revenue is derived from a tax on the palms from which toddy is drawn, and licence fees for the right of vend. The rates charged per tree tapped vary materially in different Districts. In all Districts except Nāsik the sale of toddy is conducted under the separate licensing system, under which three kinds of licences are ordinarily allowed: namely, shop licences, tree-foot booth licences, and domestic consumption licences. Shop and tree-foot booth licences are granted on payment of fixed fees—Rs. 10 in some Districts and Rs. 20 in others. Should there be more than one applicant for a shop, the right of sale is disposed of by auction. The domestic consumption licences, which are issued to owners of trees, are granted on payment of tree tax only. In Bombay City toddy shop licences are sold by auction or are granted on payment of fees assessed by the Collector. In Nāsik District the exclusive right to supply and sell toddy is granted to a farmer under the 'minimum guarantee system': that is, the farmer has to pay tree tax on the trees from which he draws toddy, and, if the total amount of such tax is less than the amount of revenue guaranteed, he

has to make up the balance. The farmer has further to pay a fee of Rs. 15 for every shop opened by him. Maximum prices for the retail sale of toddy are fixed in all the Districts except Bombay City, where they apply only in the case of tree-foot booth licensees.

There is one brewery in the Presidency, at Dāpuri near Poona. The beer issued is excised at the tariff rate of one anna per gallon, and is sold along with imported liquors. Rum is manufactured at a sugar refinery at Mundhwa near Poona, and issued to the Commissariat department and for sale by foreign liquor shop-keepers; it also is excised at the tariff rate (Rs. 7 per proof gallon)[1]. Rum, spirits of wine, and methylated spirits manufactured at the Rosa (Shāhjahānpur) distillery in the United Provinces and at the Aska and Nellikuppam distilleries in the Madras Presidency are occasionally imported into Bombay on payment of duty at the tariff rates, and are sold under licences for the vend of foreign imported spirits. Country liquors excised at tariff rates.

The duty realized on spirits, wines, and liquors imported from foreign countries is credited to customs revenue (Imperial), the figures for the Presidency proper being as shown below:— Foreign liquors.

	Thousands of rupees.
Average of ten years 1881-90 . . .	12,20
" " 1891-1900 . . .	19,15
In the year 1900-1	21,42
" 1903-4	24,26

The duty realized on spirits, &c., imported into Sind in 1903-4 amounted to nearly 8 lakhs. A small charge for the right of vend at shops, hotels, refreshment rooms, and travellers' bungalows forms the excise revenue from this class of liquor. The maximum fee for such licences is fixed at Rs. 500, except in the City and Island of Bombay, where there is no maximum.

The cultivation of hemp is restricted under the Bombay Abkāri Act, as amended in 1901, to certain villages in the Khānāpur *tāluka* of Sātāra District, and in the Nevāsa, Ahmadnagar, Rāhuri, and Kopargaon *tālukas* of Ahmadnagar District. Drugs manufactured in these *tālukas* are stored in central and bonded warehouses. Duty at the following rates is levied on intoxicating drugs issued from these warehouses or imported from outside the Presidency: *bhang*, 8 annas per seer (about 2 lb.); *gānja*, Rs. 4 per seer; *charas*, Rs. 6 per Intoxicating drugs.

[1] The Mundhwa refinery is to be closed.

seer (Rs. 2 prior to April 1, 1904). The wholesale business is separated from the retail vend. Licences for wholesale vend are issued to persons approved by the Collector and the Commissioner of Abkāri on payment of a fixed annual fee of Rs. 15. The privilege of retail vend is sold for each shop separately by public auction. *Gānja* comes to Bombay from the Central Provinces; *bhang* from the Punjab and the United Provinces; *charas*, through the Punjab, from Central Asia.

Total excise revenue.

The revenue under excise derived from the various sources mentioned above, for the two ten-year periods ending 1889-90 and 1899-1900, and for each of the years 1900-1 and 1903-4, for the Presidency (excluding Aden, Bhūj, and Baroda), was, in thousands of rupees:—

	Average revenue * for ten years.		Realizations in	
	1880-1 to 1889-90.	1890-1 to 1899-1900.	1900-1.	1903-4.
Country spirit and toddy	66,72	89,32	85,19	1,02,09
Rum, &c., excised at tariff rates	1,11	43	34	91
Vend fee on imported foreign liquors		1,13	1,41	1,69
Intoxicating drugs other than opium	1,99	3,85	4,75	4,94
Opium	11,42	12,39	7,14	8,52
Miscellaneous	94	88	73	79
Total gross revenue	82,18	1,08,00	99,56	1,18,94
Total net revenue	78,65	1,02,92	95,07	1,12,56
Incidence of net revenue per head of population	Rs. a. p. 0 5 4	Rs. a. p. 0 6 1	Rs. a. p. 0 6 0	Rs. a. p. 0 7 1

* These figures refer to the year ending July 31.

The administration of the Excise department is similar to that which has been described in the case of opium. Some of the Native States have leased their excise revenue to the British Government for a period of years, in consideration of a sum paid annually in compensation, and these have been attached for excise purposes to the adjacent British Districts. Others work under the British system, while others again have agreed to maintain a shopless belt along the joint frontier.

Character of local consumption.

Foreign liquors are largely consumed in towns like Bombay, Poona, and Belgaum, where there is a numerous European, Eurasian, and Pārsī population; and to a smaller extent by the higher classes of Hindus in large towns. Consumption has undoubtedly been extended by plague, the use of these liquors being considered a prophylactic. Spirit distilled from

mahuā is consumed in all Districts, except Ratnāgiri, because this is the cheapest fermentable material. In Ratnāgiri, Kanara (coast), the City of Bombay, and a part of Thāna District, toddy spirit is largely used for the same reason; but in this case habit has something to do with the preference for this spirit. Rum or molasses spirit is used to a limited extent in Poona, Sātāra, Belgaum, and Dhārwār Districts. Toddy is consumed in almost all parts of the Presidency, especially in Surat, Thāna, Belgaum, Bijāpur, Dhārwār, and Poona, where a large number of palms are available. Of the intoxicating drugs, *gānja* is principally used for smoking, particularly in Bombay, Poona, Ahmadābād, Surat, Khāndesh, and Kanara. *Gānja* smoking is regarded as a protection against cold, and the consumption is greatest during the cold season. *Bhang* is used in the form of drink and of sweetmeats, but more particularly as a drink, in the City of Bombay, in the Gujarāt Districts, and in the Native States of Cutch and Kāthiāwār. The drinking of *bhang* is regarded as having a cooling effect in hot weather. *Charas*, a very strong intoxicant, is used for smoking only in Bombay City and in Ahmadābād. Opium is largely consumed in Bombay, Poona, Khāndesh, the Gujarāt Districts, and the Native States of Cutch and Kāthiāwār. The consumption is greatest among races which were originally resident in Central India or in tracts adjoining it.

Efforts made by Government to restrict consumption.

The efforts made by Government to restrict the consumption of liquors, intoxicating drugs, and opium may be summed up as follows:—

(1) Imposition on these articles of taxation as high as is compatible with the avoidance of illicit production or importation;

(2) Abolition of the outstill system, and concentration of the manufacture of spirits at central or private distilleries under the supervision of Government establishments;

(3) Limitation of the number of places at which liquor or drugs can be purchased, with due regard to the circumstances of each locality;

(4) Limitation of the quantity of liquor or drugs which may be legally transported or possessed; and

(5) Employment of preventive establishments to check production and smuggling.

The general feeling of the public on the subject of intoxicants is adverse to their use, and there is a tendency to assume that the policy of Government encourages consumption. The

secular education provided by the State undoubtedly has this effect, by weakening social and religious influences, and the example of Europeans leads the educated classes towards the consumption of foreign liquors. These effects are generally deplored. At the same time native publicists are apt to forget that fermented and distilled liquors, as well as opium and intoxicating drugs, have always been freely used in India. The existing system is entirely defensible in principle; and stanch advocates of temperance among the natives themselves admit that over large areas, and for large classes of the population, the use of a narcotic stimulant of some kind is actually necessary owing to climatic reasons and the conditions under which life has to be lived. There is no doubt room for improvement in detail, and the attention of Government is steadily directed to this—one of the most difficult problems with which it has to deal.

Excise on cotton goods.

In 1894 the taxation of imported cotton goods at 5 per cent. was accompanied by the passing of an Act imposing a similar tax on locally produced cotton goods. In 1895 the tax was replaced by one of 3½ per cent. on cotton fabrics, whether imported or locally produced by machinery, yarns being duty-free. The excise or local duty is collected, through the agency of the Bombay Custom House, by an assessment on monthly returns of cotton fabrics issued from the mills. The total net revenue derived from this source is 17 lakhs, the annual taxable output being nearly 113,000,000 pounds of cloth. A rebate of the full duty is allowed on cloth exported to foreign countries.

Stamps.

The stamp revenue is collected under the authority of the Court Fees Act and the Stamp Act, which are uniform for all India and are described in Vol. IV, chap. viii. The revenue from judicial and non-judicial stamps during the last twenty years has been, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Judicial . . .	22,99	29,79	33,68	35,09
Non-judicial . .	18,72	23,77	25,22	26,39
Total	41,71	53,56	58,90	61,48

The sales of stamps of all descriptions are steadily increasing in normal years. In 1900-1 the prevalence of widespread famine caused a slight falling-off in the sale of court-fee or judicial stamps; but the decline was only temporary, and the sales have since recovered and exceeded their former volume.

The income-tax revenue is collected under an Act applying to the whole of India, and is described in Vol. IV, chap. viii. In Bombay City a special Collector is appointed for assessing and collecting the revenue; elsewhere the duty is entrusted to the ordinary revenue staff. The net annual revenue since the tax was introduced has been as follows, in thousands of rupees: (five years ending 1890) 34,24, (ten years ending 1900) 38,59, (1900–1) 38,62. Of the total of 36¼ lakhs collected in 1903–4, 21½ lakhs, or 59 per cent., was levied in Bombay City, which contributes nearly one-tenth of the yield of the tax for the whole of India. In the Presidency the incidence of the tax is about 3 annas per head, while the average number of assessees per 1,000 of population is 4. Income tax.

The customs administration of the Presidency (excluding Sind) is in charge of a Collector for Bombay, and a second Collector, who is also the Collector of Salt, for the smaller ports of the Presidency. In Sind there is a Collector of Customs at Karāchi, subordinate to the Commissioner in Sind. A large preventive staff, under numerous Assistant Collectors of Salt and Customs, is maintained to patrol and guard the long coast-line, as well as the land frontier overlooking the Portuguese possessions and the Native States of Northern Gujarāt. Most of the dutiable articles imported pass through Bombay. Castle Rock on the Goa frontier is, however, a customs post of increasing importance, owing to the recent growth of direct trade between Marmagao and Europe. The respective share of the customs revenue of the Presidency collected at these several points in 1903–4 was: Bombay, 174 lakhs; Karāchi, 33 lakhs; land posts and minor ports, 2¼ lakhs. In 1904 the Kāthiāwār frontier line was opened, with a chief customs station at Viramgām. In 1882 the duties on imported goods not falling under special categories, such as arms, salt, and liquors, were abolished, to be replaced in March, 1894, with the exception of cotton goods, which were not restored to the dutiable list till the end of that year. The cost of collecting the customs duties amounts to 4 per cent. on the total receipts. The chief items are derived (1903–4) from cotton goods, hardware and metals, oil, sugar, and liquors, as follows: cotton goods, 35 lakhs; hardware and metals, 46 lakhs; oil, 18 lakhs; sugar, 20 lakhs; and liquors, 32 lakhs. In most cases the import duty amounts to 5 per cent. on the value. Cotton goods are admitted at 3½ per cent., and arms and liquors pay at higher rates. There is an export duty of 5 per cent. on all rice exported, yielding over 4¼ lakhs. With Customs.

a view to stimulating local industries, coal and machinery are allowed to be imported free. Dutiable goods re-exported within three years are, on satisfactory proof of identity and of payment of duty, granted a drawback amounting to seven-eighths of the duty paid. Table VIII, showing the annual yield of the import duties on the chief articles imported into the Bombay Presidency since 1895, when the tariff was put on its present basis, and the total yield for the same years, will be found on p. 141.

Local self-government.

Local control over certain branches of the administration is secured by the constitution of local boards and municipalities, the former exercising authority over a District or a *tāluka*, and the latter being entrusted with the care of a city or town. These local committees are composed of members either nominated by Government or elected by the people, who are empowered to expend the funds at their disposal on education, sanitation, the construction of roads and tanks, the prevention of nuisances, and generally in improving the area committed to their charge.

District and *tāluka* boards.

Each District has a District board, which receives the proceeds of a cess amounting to one anna in the rupee on all land revenue in the District, all toll and ferry funds, and some minor items. One-third of the funds thus received must be spent on education; but the board is otherwise free to direct the expenditure of its funds as it pleases, subject to the limitations imposed by the law constituting the boards. The District boards make over a part of their revenues to the *tāluka* boards, who may expend it on similar works within the limits of the *tāluka*. The origin of these committees dates from 1863, when the Bombay Government sanctioned the establishment of Local funds for the promotion of education in rural Districts and the construction or repair of local roads. The District committees were to consist of the principal Government officers of the District, and other members to be selected by the Collector. *Tāluka* committees were to be composed of the Collector, the subdivisional officer, the *māmlatdār*, and three or more members nominated by the Collector. This system was for a few years carried out without the aid of legislation; but as it was subsequently found necessary to legalize the levy of the local cess, Bombay Act VIII of 1865 and Act III of 1869 were passed for this purpose, the former being applicable to Sind, the latter to the remainder of the Presidency. In 1884 a new Act (I of 1884), styled the District Local Boards Act, placed these committees on a more popular basis. The

tāluka board, which is the unit of rural self-government, thenceforth consisted of an equal number of elected and nominated members, excluding the president. The right of voting at elections was conferred on honorary magistrates, revenue or police *pātels*, landholders paying at least Rs. 48 assessment, owners of immovable property worth Rs. 5,000, persons with a yearly income of Rs. 500, and pensioners on Rs. 50 and over a month. Holders of alienated villages, and municipalities of 5,000 inhabitants and over, could also return members to these boards. The District board was to consist of certain nominated members and of members elected by *tāluka* boards, by municipalities with a population of not less than 18,000 inhabitants, and by the holders of alienated villages. Usually the Collector is president of the District board thus constituted, while his Assistants preside over *tāluka* boards in their charges. The vice-president may be either an official or an unofficial member, and is elected by the board. The number of local boards as thus constituted was 231 in 1903–4: namely, 46 in the Northern Division, 72 in the Central, 56 in the Southern, and 57 in Sind. They contained 32 *ex-officio* members, 1,941 nominated and 1,600 elected members. The taxation raised by these boards on a population of more than 17 millions averages 4·4 annas per head, and they had in 1903–4 an aggregate income of 48 lakhs. The chief items of expenditure are education and public works, to which over two-thirds of their income is devoted. The boards are called on to contribute, to the extent of their capacity, to the cost of famine relief measures, or to the suppression of dangerous epidemics in the area under their control.

Municipalities.

The origin of municipal government in the Presidency outside Bombay City is Act XXVI of 1850, which permitted the establishment of municipalities in towns where the people applied for them, and restricted the expenditure of money raised by such bodies to the making and repair of public streets, drains, tanks, &c., and the prevention of nuisances. In 1862 further legislation empowered municipalities to spend money on dispensaries, hospitals, schools, and road-watering, and by the same Act the Government received the power to coerce recalcitrant municipalities into carrying out measures urgently needed. In the course of twenty years the Act of 1850 was taken advantage of by only 96 towns, the population of urban areas being generally unwilling to submit to municipal taxation and control. An Act (VI of 1873) was therefore passed dividing municipalities into city and town municipalities;

the executive power in the former being entrusted to the municipal commissioners as a body, and in the latter to the president, vice-president, and chairman. The elective franchise could be granted to city municipalities, and a town municipality could receive this privilege where the residents showed sufficient public spirit to justify the measure. In 1882 the control of local elementary education was given to municipalities. In 1884 a new Act (II of 1884) was passed, abolishing the former distinction between city and town municipalities and extending the elective element. The municipal law in the province of Sind was at the same time placed on the same footing as that of the Presidency proper. In 1901 a further enactment (III of 1901) enlarged the powers of municipalities, and re-established their division into city and town corporations. The former are allowed to appoint executive officers with extensive functions, and to possess wider powers for dealing with the recovery of taxes, the construction of new buildings, and outbreaks of epidemic disease. By this Act rates may be levied in certain areas which do not possess municipalities, the proceeds being devoted to the same objects as those for which municipal taxation is raised. Excluding Bombay City, there were 165 municipal towns in the Presidency in 1903–4. Of these, only 4 have a population of over 100,000, and 69 have a population exceeding 10,000. Of the total of 2,252 members, 473 are *ex officio*, 881 are elected, and 898 nominated by Government. The population of municipal areas is 2,380,748, from which taxation amounting to 39 lakhs is levied, at an average of Rs. 1–10–7 per head. The total municipal income is over 71 lakhs, and the chief items of expenditure are conservancy and education. Administration and the cost of collecting taxes involve a charge of 8 per cent. on the total income. Tables IX and X on p. 142 show further financial details for District boards and municipalities for the average of the ten years ending 1900, and for 1900–1 and 1903–4.

General results of local self-government.

It would be difficult to assert that the result of the establishment of these numerous local bodies has been to develop in any marked degree civic ardour for local affairs, or a sense of responsibility regarding the expenditure of the proceeds of local taxation. In many cases the ear-marking of one-third of the total income for expenditure on education, and the very large share of the balance that must necessarily be devoted to establishment charges and the upkeep of roads, leaves little scope for the exercise of the power of control that members possess; and this necessarily diminishes the interest that the control of

local affairs might otherwise inspire. The system is, however, of educative value, inasmuch as it accustoms the people to the working of popular institutions.

The Presidency contains three Port Trusts—at Bombay, Karāchi, and Aden. Of these, the Bombay Port Trust, constituted in 1873, consists of 13 members, partly nominated by Government and partly elected by the Chamber of Commerce. The port of Karāchi was entrusted to a Harbour Board in 1880, which was subsequently created a Port Trust on the lines of the similar body in Bombay. The Aden Trust dates from 1889. The Trusts are in charge of the wharves, docks, harbour, lights, &c., and are charged with the duty of providing conveniences for the trade and shipping of the ports. Port Trusts.

During recent years the income and expenditure of these Trusts has been, in thousands of rupees:—

	Receipts.			Expenditure.		
	1881-2.	1891-2.	1903-4.	1881-2.	1891-2.	1903-4.
Bombay . .	37,46	48,10	64,41	28,73	46,24	56,98
Karāchi . .	4,48	9,57	19,58	3,77	5,14	13,87
Aden . .	...	1,92	4,66	...	2,56	3,78

Among works of importance carried out by these bodies are the Prince's Dock, the Merewether Dry Dock, and the Victoria Dock at Bombay, and the new docks at Bombay still in course of construction.

The Public Works department is controlled by two Chief Engineers, who are also secretaries to Government, by Superintending Engineers in charge of divisions, Executive Engineers in charge of Districts, and such Assistant Engineers as may be required by the circumstances of the case. The officers deal with all classes of public works, but additional Executive Engineers are in some instances posted to take charge of important irrigation works. The staff in 1905 consisted of 2 Chief Engineers, 5 Superintending Engineers, excluding the Sanitary Engineer and Consulting Architect to Government, who is a temporary officer, 33 Executive Engineers, and 44 Assistants. There were also one apprentice and one Executive Engineer lent by the Government of India. Six temporary Engineers are under three to five years' covenant, and twelve under yearly sanction. The department is concerned with the construction and maintenance of all works, such as roads, bridges, hospitals, offices, irrigation reservoirs, canals, and the like, that are too costly and important to entrust to the professional staff of local bodies; it also checks the plans and Public Works.

estimates of all but the most insignificant works undertaken by those bodies. The Executive Engineer is, moreover, a member of each District board.

Irrigation works.

In 1881 the total expenditure of the Bombay Public Works department, exclusive of irrigation, was about 64 lakhs. During the ten years ending 1900, the average was 123 lakhs, and in 1903–4 the expenditure was 71 lakhs. Apart from the maintenance of the roads, irrigation works, and buildings already in existence at the commencement of this period, the expenditure of the department has been devoted to original works, of which the most costly, and the most important in developing the resources of the country, are water storage and irrigation works. Chief of these is the JAMRAO CANAL in Thar and Pārkar District, constructed at a cost of 66 lakhs, which has opened a hitherto uncultivated tract to settlers from other parts of the province of Sind and from the Punjab. A like expenditure incurred on the Muthā Canal in Poona District has rendered the water of the Muthā river available for cultivation, while the Nīra Canal in the south-east of the same District cost 54 lakhs in construction. At Gokāk, in Belgaum District, the waters of the Ghatprabha river have been impounded by a masonry dam, and made available for the working of the Gokāk cotton-mills, as well as for the irrigation of the land in the vicinity. This work, which is capable of extension when required, has so far cost 13 lakhs. At Mhasvād in Sātāra and at Ekrūk in Sholāpur irrigation tanks have been constructed at a cost of 20 and 12 lakhs respectively. Numerous smaller irrigation works, among which may be mentioned the Jāmda canal in Khāndesh, the Kistna canal in Sātāra, and the reservoirs at Kapurvādi in Ahmadnagar, at Ashti in Sholāpur, and at Vāghad in Nāsik stand to the credit of the Public Works department. It has also carried out many large schemes for improving the water-supply of the cities. Chief of these are the Surat and Kirkee water-supply schemes, costing $9\frac{1}{2}$ and $7\frac{1}{2}$ lakhs respectively. The expenditure of the department on irrigation in 1880–1 was 21 lakhs, the average for the ten years ending 1900 was 36 lakhs, and 52 lakhs was spent in 1903–4.

Roads and buildings.

As funds are available, the construction of fresh trunk and feeder-roads is undertaken either by the department or by local boards; but progress in this direction is retarded by the necessity of providing for the subsequent upkeep of such works, on which the wear and tear of monsoon rainfall is very heavy. Hospitals, lunatic asylums, school-houses, offices for Govern-

ment business, and lighthouses help, with an occasional drainage scheme, to fill the rest of the public works programme. The more costly works of these descriptions undertaken in the Presidency during recent years are the following:—

Roads.—From Belgaum to the port of Vengurla, 78 miles; from Godhra to Dohad, 43 miles; from Mahād to Mahābaleshwar via the FitzGerald *ghāt*, 36 miles; from Kolhāpur to Ratnāgiri via the Ambā *ghāt*, 82 miles; from Nadiād to Kapadvanj, 27 miles; from Gokāk to Nargund, 50 miles.

Hospitals, &c.—The Bai Motlibai and the Sir Dinshaw Mānekjī Hospitals in Bombay, a military hospital at Ahmadābād, and a civil hospital at Aden.

Lunatic Asylums.—At Navāpāda near Thāna and at Ratnāgiri.

Schools.—The Elphinstone College and High School in Bombay, the training college at Dhārwār, and the Gujarāt College at Ahmadābād.

Among other buildings may be noted the High Court (cost 17 lakhs) and Small Cause Court in Bombay; the Bombay police courts; the treasury and courthouse at Aden; and the new Rock lighthouse at Vengurla.

Large municipal works.

Since 1884 the chief water-supply and drainage works undertaken by the municipalities of the Presidency have been:—

The Tānsa water-works in Bombay (cost 150 lakhs); the drainage of Bombay City (8 lakhs); the Hubli water-works (5 lakhs); the Ahmadābād water-works (4 lakhs); and the Surat supply scheme.

Army.

The total number of troops stationed within the Presidency on June 1, 1904, was 22,008, of whom 9,215 were British, and 12,793 belonged to the Native army.

Bombay Presidency, except Aden, is garrisoned by the Quetta, Mhow, and Poona divisions of the Western (now Southern Command, of which the troops at Aden form an independent brigade. The military stations in 1904 were:—

Quetta Division.

Hyderābād.	Karāchi.	Sukkur.
Jacobābād.	Manora.	

Mhow Division.

Ahmadābād.	Deesa.	Rājkot.
Bhūj.	Pālanpur.	

Poona Division.

Ahmadnagar.	Deolāli.	Khandāla.	Purandhar.
Belgaum.	Hubli.	Kirkee.	Sātāra.
Bombay.	Igatpuri.	Poona.	Sirūr.

Aden Brigade.

Aden; Perim; Shaikh Othmān.

Bombay and Karāchi possess arsenals, and Kirkee an ammunition factory. A gun-carriage factory hitherto located at Poona has recently been closed.

The Volunteers of the Presidency, with head-quarters at Bombay, Poona, Karāchi, Belgaum, Hubli, and several other smaller stations, numbered 3,594 in 1904, of whom 352 were artillery and 65 were light horse or mounted rifles.

Many of the Native States maintain small bodies of troops; the principal are:—

	Infantry.	Cavalry.	Total.
Kolhāpur	734	156	912*
Cutch	572	284	856
Navānagar	1,058	26	1,093*
Junāgarh	1,788	62	1,884*
Bhaunagar	288	51	339
Sāvantvādi	286	...	306*

* Includes a small force of artillery.

Police and jails.

The Bombay police consists of several distinct forces: the regular District police, the Bombay City police, the railway police, and the village watch. The last-mentioned body is maintained only in certain parts of the country, and at the expense of the villagers. The Bombay City police is described in the article on BOMBAY CITY. The District police is a stipendiary force divided into grades, beginning with constables on Rs. 7 a month. *Tālukas* and Districts are in charge of chief constables and a District Superintendent respectively, between whom are placed inspectors, and, occasionally, Assistant Superintendents. Chief constables thus correspond to sub-inspectors in other parts of India. The District Magistrate controls the police administration of the District, subject to the orders of the Commissioner, and uniformity in matters of routine is ensured by the appointment of an Inspector-General for the Presidency (excluding Sind). A part of the District police force are armed, and employed in guarding jails and treasuries, or escorting prisoners and treasure. In 1904 the District force consisted of 17,173 men, of whom 12,107 were armed. The proportion of the police to area and population is determined by local conditions. The Northern Division has

Ordinary police.

one policeman to every 4 square miles and 1,064 persons; the Central Division, one to 9 square miles and 1,477 inhabitants; the Southern Division, one to 9 square miles and 1,934 inhabitants; and Sind, one to 16 square miles and 1,076 inhabitants. About 1,000 of the police are mounted, mainly for service as orderlies.

Police measures under native rule.

Under native rule, District police were unknown; and the responsibility for detecting crime rested entirely on the village until the days of Nāna Farnavīs, when inspectors (*tapāsnavīs*) were appointed to discover offences. The *pātel* was responsible for the police of his village. His responsible assistant was the village watchman (*mahār*), whose duties were to keep watch at night, to find out all arrivals and departures, watch all strangers, and report all suspicious persons to the headman. The watchman was also bound to know the character of each man in the village; and when a theft was committed within village bounds, it was his business to find the thief. He was enabled to do this by his early habits of inquisitiveness and observation, as well as by the nature of his allowance, which, being partly a small share of the grain and similar property belonging to each house, required him always to be on the watch to ascertain his fees, and always in motion to gather them. When a theft or robbery occurred, the watchman began his inquiries and researches. It was very common for him to track a thief by his footsteps; and if he did this to another village so as to satisfy the watchman there, or if he otherwise traced the property to an adjoining village, his responsibility ended. It then became the duty of a watchman of the new village to take up the pursuit. The last village to which the thief had been clearly traced became answerable for the property stolen, which would otherwise have had to be accounted for by the village where the robbery was committed. The watchman was obliged to make up this amount as far as his means went, and the remainder was levied on the whole village. Only in particular cases was the restoration of the value of the property insisted on to its full extent. Some fine was generally levied; and neglect or connivance was punished by transferring the grant or *inām* of the *pātel* or the watchman to his nearest relation, by fine, by imprisonment in irons, or by severe corporal punishment. This responsibility was necessary, as, besides the usual temptation to neglect, the watchman was himself a thief, and the *pātel* was disposed to harbour thieves with a view to share their profits.

The village watch do not receive regular monthly pay. They

Village police.

are controlled by the village headman or *pātel*, on whom lies the duty of calling in the District police when crimes are committed. His subordinates guard the village and assist in the apprehension of offenders. The *pātel* and his assistants are important features in the machinery for detecting crime, and the success of the District police in that direction largely depends on the amount of assistance received from them. In the Deccan these village watchmen are recruited from the Rāmosis, who were formerly a criminal and marauding tribe. Each village possesses five or more of these men, who are paid in kind and occasionally have a portion of the village lands assigned to them. Rāmosis are also employed in towns as night-watchmen for offices and dwelling-houses, and in this capacity they form a recognized division of the town police. *Pātels* are still permitted in certain instances to investigate and punish petty offences without the intervention of the District police. In Sind there are no village police, their place being taken by the *zamīndārs*, whose assistance is of great value in the detection of crime. The employment of *pagis* or professional trackers is common. They are skilful in their work, and are rewarded by gifts from the owners of stolen animals, or payments by the community.

Special branches.

The office of Inspector-General of Police has two special branches, dealing with criminal investigation and criminal identification. The former was organized in 1901 for the detection of serious crime the ramifications of which extend beyond the limits of one District. The latter records and traces the identity of criminals by means of thumb-marks and finger-tip impressions. A special police organization exists in connexion with the railways of the Presidency. Each of the principal lines is organized like a District, under a Superintendent, who is directly subordinate to the Inspector-General, and is employed in travelling along the line, inspecting platform constables, and investigating crimes.

In cantonments the military authorities provide a small number of military policemen to assist the local police force in the maintenance of order in cases where military offenders are concerned. The control of this staff rests with the military authorities. The strength of the various grades of the police in the last twenty years, and the result of the work of the force, are shown in Tables XI and XII on p. 143.

In 1904 the total force in the Presidency, including railways and Sind, but excluding the City of Bombay, was 22,380 officers and men, and cost 45 lakhs.

While this article was passing through the press the force was reorganized, the principal changes being the appointment of Deputy-Inspectors-General for Sind, for the rest of the Presidency, which has been divided into two ranges, for railways, and for crime; the appointment of Deputy-Superintendents of police; and an increase in the numbers and salaries in the lower grades. The control and direction of the police still rest primarily with the District Magistrates, while the control formerly exercised by Commissioners of Divisions has practically been transferred to the Inspector-General. Reorganization.

Statistics relating to the jails of the Presidency will be found in Table XIII on p. 143. The Jail department is under the administration of an Inspector-General, who ordinarily belongs to the Indian Medical Service. A full-time Superintendent is employed at each of the three Central jails—at Hyderābād, Ahmadābād, and Yeraoda; the District jails are in charge either of full-time civil officers who are not medical men or of civil surgeons as additional charges, and lock-ups are under local magistrates. Of the District jails, those at Thāna and Aden, as also the House of Correction and the common prison at Bombay, are known as special jails, as they accommodate long-term prisoners. Excepting Aden, each of these has a full-time Superintendent. The most prevalent diseases of the prison population are intermittent fever, diarrhoea, dysentery, and pneumonia. Numerous industries are carried on in the jails, the chief of which are the weaving of cotton goods, such as jail clothing, coarse cloth, towels, and *darīs*; carpet-making; basket-work; and printing. The out-turn is sold to the general public at rates which usually exceed the ordinary market prices; but the excellence of the articles ensures a regular demand for them. Numerous articles are also supplied direct to Government departments, while a printing press at the Poona Central jail, started in 1900, relieves the Government Press in Bombay of much routine printing. Jails.

The Presidency contains two reformatories, one at Bombay and one at Poona. Both are under the control of the Educational department. The latter is classed as an Industrial school. In 1904 there were 380 inmates in these institutions, receiving instruction in agriculture or industries. Reformatories.

Under native rule craftsmen were taught their arts at home by their fathers, while traders and secular Brāhmans learnt to read, write, and cast accounts in private schools. Higher education was represented by Sanskrit *pāthsālas* and Muhammadan *madrasas*, which often shared in religious endowments. Education.

The later Peshwās held a yearly distribution of gifts (*dakshina*) to learned Brāhmans, which at last took the form of indiscriminate alms-giving, and cost five lakhs a year. The British conquest of the Deccan was followed by the opening of many missionary schools and by the organization, under the guidance of Mountstuart Elphinstone, of a system of Government schools in the Districts. In 1821 a part of the *dakshina* grant was devoted to the creation of a Sanskrit College at Poona, which afterwards grew into the existing Deccan College, and in 1827 a large sum was raised by subscription to found the Elphinstone College at Bombay. In 1840 a Board of Education was created, which, under the influence of Sir Erskine Perry (1843–52), devoted itself chiefly to improving the teaching of English, in the hope that the love of knowledge would filter down from the higher classes to the lower. The Grant Medical College was opened in 1845, and the Poona College of Science grew out of an engineering school founded in 1854. The Board of Education was abolished in 1855 on the constitution of the existing Educational department, to carry out the policy of Sir Charles Wood's famous dispatch of 1854. The Bombay University was established in 1857. The establishment of public primary schools by the local boards under the guidance of the Educational department dates from the levy in 1863 of the Local fund cess, one-third of which is set aside for education. In 1884 the burden of supporting primary schools in municipal towns was transferred from the local boards to the municipalities. Soon afterwards the system of grants in aid of private effort was greatly expanded in accordance with the views of the Education Commission.

The Educational department is administered by a Director, who has under him an Inspector in each Division and a Deputy-Inspector, with assistants, in each District. These officers inspect all schools that receive state aid, and also administer the public primary schools supported by local boards. The Director and three of the Inspectors are recruited from England, while the other Inspector belongs to the Provincial service, and the deputies and their assistants to the Subordinate service. Two Inspectresses of Girls' Schools, recruited from England, have lately been added. The Government maintains two Arts colleges, one Medical college, and a College of Science, the teaching staff of which includes twenty-one professors recruited from England and fourteen belonging to the Provincial service. The Government also maintains in Bombay and at the head-quarters of each District (except Ahmadnagar, Kolāba,

Lārkāna, Thar and Pārkar, and Upper Sind Frontier) a high school as a model secondary institution. Three head masters of high schools are recruited from England, and the rest belong to either the Provincial or the Subordinate service.

The Bombay University up to 1905 was a body corporate consisting of the Chancellor, who was the Governor of the Presidency for the time being, the Vice-Chancellor, appointed by Government for a term of two years, and a Senate of about 280 Fellows, nominated by Government of its own motion, or, in the case of two appointments every year, on the recommendation of the University. Under the new constitution introduced by Act VIII of 1904 the total number of Fellows is 110, of whom not more than 10 are *ex-officio* Fellows and the remainder are styled Ordinary Fellows. Of the Ordinary Fellows ten are elected by the Graduates, ten by the Faculties, and the rest are nominated by the Chancellor. At least two-thirds of the total number of Fellows elected by the Faculties or nominated by the Chancellor must be persons following the profession of education. The executive government of the University vests in the Syndicate, which is composed of the Vice-Chancellor, the Director of Public Instruction, and not less than seven or more than fifteen *ex-officio* or Ordinary Fellows elected by the Senate or Faculties. The Senate, or general body of Fellows, is the legislative authority of the University. The function of the University has hitherto been to ascertain, by means of examination, the persons coming from affiliated colleges who have acquired proficiency in different branches of literature, science, or art, and to reward them by academical degrees as evidence of their respective attainments. Under the new Universities Act, it will be able to provide for direct higher instruction and to exercise a closer supervision over its colleges. The degrees given are those of Bachelor and Master of Arts (B.A., M.A.) and Bachelor of Science (B.Sc.); in Law, that of Bachelor of Laws (LL.B.); in Medicine, Doctor of Medicine (M.D.) and Licentiate in Medicine and Surgery (L.M. & S.); in Agriculture, that of Licentiate in Agriculture (L.Ag.); and in Civil Engineering, those of Licentiate of Civil Engineering (L.C.E.) and Master of Civil Engineering (M.C.E.). Of the ten Arts colleges, excluding Baroda, affiliated to the University, all but one (the Rājārām College at Kolhāpur) teach the full degree course for B.A.; and the B.Sc. classes (full degree) are taught at the Elphinstone, Wilson, St. Xavier's, and Fergusson Colleges. There are also

University education.

B.Sc. classes at the Grant Medical College at Bombay and the College of Science at Poona. The Government Law School, Bombay, educates up to the full LL.B. standard, while six law classes attached to Arts colleges teach up to the first LL.B. examination only. The Grant Medical College, Bombay, teaches the full course; and the College of Science at Poona teaches the agricultural and engineering courses. Of the Arts colleges, two are maintained by Government and four by Native States, including one in the State of Baroda; and all the rest, two of which belong to missionary bodies while the other three are managed by committees, receive aid from the Government. There are no purely private proprietary colleges. The most important Arts colleges are the Elphinstone, Wilson, and St. Xavier's Colleges in Bombay, and the Deccan and Fergusson Colleges at Poona. The total expenditure of the University in 1903-4 amounted to about 1⅓ lakhs, which was more than covered by fees, &c.

Candidates for the B.A. degree are required to have attended an affiliated college for eight terms (four years). A similar course is required for the B.Sc. degree, while for the L.C.E. and L.Ag. degrees one year in an Arts college followed by three years in a Science college, and one year in an Arts college followed by two years in a Science college, are respectively required. Four years in a Medical college are necessary for a candidate for the L.M. & S. degree, and the M.D. degree can be conferred only on those who have graduated in both Medicine and Arts (eight years). A two years' course is required from the candidate for the LL.B. degree. The M.A. degree can be obtained at any time, usually one year, after graduating in Arts. Hostels for resident students are attached to every college, except St. Xavier's in Bombay and the Junāgarh and Bhaunagar colleges in Kāthiāwār.

The other examinations conducted by the Bombay University are the matriculation (the entrance examination for Arts and Medical courses), previous (the first examination in Arts and the qualifying examination for Agriculture and Engineering courses), intermediate Arts and intermediate Science examinations; in law, first LL.B. In Medicine, Agriculture, and Engineering, there are first and second examinations before appearing for the degree examination of the course.

Secondary education.

The normal type of secondary education is a course of seven standards, in all of which, except the first three, English is the medium of instruction and the leading subject studied. This course leads up to the University matriculation or the school

final examination[1], the two courses bifurcating after the fifth standard. They differ in that for the school final course a number of optional subjects are prescribed, out of which two have to be taken, with compulsory English, a second language, and arithmetic. Of the secondary schools for boys in the Presidency (1903–4), 106 are high schools and 318 middle or Anglo-vernacular schools teaching the first three standards only, 26 are maintained by Government and 113 by Native States, while 209 (of which 68 are maintained by municipalities or local boards and 141 are under private management) receive Government grants-in-aid and 76 are unaided. The Government grant-in-aid for any year is fixed at one-third of the total expenditure of the school in the previous year, and may in no case exceed one-half the local assets of the school. The grant is reducible to one-fourth or one-fifth of the expenditure, according to the efficiency of the school. Of the male population of school-going age, 2·2 per cent. attended public secondary schools in 1903–4. The progress made in secondary education during the last twenty years is shown in the following table:—

	Number of public institutions.	Scholars.	
		Males.	Females.
1880–1	292	20,028	1,334
1890–1	403	37,941	3,773
1900–1	484	42,554	5,074
1903–4	492	40,987	5,035

Primary education.

Primary schools are of two types, one of which teaches a course of seven standards that aims at giving a complete vernacular education, while the other has a course of five simpler standards devised to meet the needs of the cultivating classes. The transition to secondary education occurs after the fourth standard of the full vernacular course. The majority of the schools of both types are maintained by District or municipal boards. In 1903–4 Government maintained 11 primary schools for boys, District and municipal boards 4,729, and Native States 2,060, while 1,534 schools under private management received Government aid and 118 were unaided. The District board schools are administered by the Educational department, and, like the municipal and the more efficient aided schools, receive grants equal to one-half of their expenditure, and teach the Government standards. A certain

[1] Since 1904 this examination has been conducted by the Educational department, and the course was altered in 1906.

number of indigenous schools receive small lump grants, in the hope that they may grow into primary schools of the Government type. Of the male population of school-going age, 19·8 per cent. attended public primary schools in 1903–4. Of 15,775 masters employed in public primary schools, 4,101 are head masters who have passed through a training college, 2,764 are untrained head masters, 1,564 are trained assistants, 3,887 assistants have passed the public service certificate examination, and the remainder (3,459) are untrained and unpassed assistants. The minimum pay of a trained teacher is Rs. 8 and that of an untrained assistant Rs. 7 a month. The maximum pay for masters of primary schools is Rs. 60.

Female education.

The college lectures and the university examinations are open to girls as well as boys, but there are no separate girls' colleges. In 1881 1·2 per cent., in 1891 3·75 per cent., and in 1903–4 4·74 per cent. of the female population of school-going age actually attended schools. In 1903–4 about 79 per cent. of the total attendance was in special girls' schools, and 21 per cent. in boys' schools. Of the 68 secondary schools for girls, 57 belong to the 'aided' class, and are attended chiefly by Europeans and Eurasians. Government maintains two secondary girls' schools, and one is supported by the municipality of Kārwār. Of 867 primary girls' schools, 3 are maintained by Government, 400 by District or municipal boards, and 226 by Native States, while 223 are aided and 15 unaided. In primary schools girls are taught the ordinary vernacular standards, with the addition of needlework. Early marriage and consequent withdrawal from school is the chief obstacle to female education, which now excites little active opposition. Some 200 women receive regular *zanāna* teaching, which is of use chiefly as leading them to wish to send their own children to school. Missionary effort has been successful chiefly in providing for the education of famine orphans.

Special schools.

For the training of masters, Government maintains a training college, with a three years' course, in each Division, and a normal school with a two years' course at Dhulia, and aids a private training school at Ahmadnagar. Another training college is maintained by the States of Kāthiāwār at Rājkot. These 7 institutions trained 728 pupils in 1903–4. Of the 12 training schools for mistresses, which had 239 pupils in the same year, 3 are maintained by Government, 2 by District or municipal boards, and one by Native States, while 4 receive grants-in-aid from Government and 2 are unaided. Medical schools maintained by Government at Hyderābād (for both

males and females), Ahmadābād, and Poona trained 242 pupils in 1903-4, most of whom seek employment as Hospital Assistants. The Government Veterinary College in Bombay in 1903-4 produced 8 graduates who had been through a course of three years' study, and has lately opened a vernacular class, with a two years' course, for farriers.

Subordinates for the Public Works department are trained at the Poona College of Science and in the engineering class attached to the Nava Vidyālaya high school at Hyderābād. The former institution and the aided Victoria Jubilee Technical Institution in Bombay have also classes for mechanical and electrical engineers. The Victoria Institution likewise trains foremen for the Bombay cotton-mills. The Government School of Art in Bombay, which teaches both pictorial and industrial arts, was attended by 437 students in 1903-4. Twenty-three technical and industrial schools, chiefly teaching drawing and carpentry, instructed 1,809 pupils in 1903-4, while 5 agricultural and commercial schools and classes had 201 pupils. The London Chamber of Commerce examination is held in Bombay under the auspices of Government.

Besides the public institutions mentioned above, there are 92 private schools for advanced teaching—64 which teach Arabic and Persian, 26 for Sanskrit, and 2 for other Oriental languages. The private elementary schools number 2,481, of which 1,315 teach the Korān, and the remainder teach the ordinary vernaculars. Private schools.

All schools for Europeans and Eurasians are classed as secondary, but the standards in use in them cover both the primary and the secondary stage. None are maintained by, but most receive aid from, Government. In 1903-4 they numbered 41 with 3,585 pupils. Besides these, there are 4 normal schools with 34 pupils and one industrial school with 19 pupils. Europeans seldom appear either for the school final or for the University examination, except the medical course, but commonly seek employment on the railways, in the Telegraph department, or in business. European and Eurasian education.

Certain Government scholarships are reserved for Muhammadans and other backward races, and other scholarships are given to Muhammadans only from the Kāzī Shahāb-ud-dīn Fund. Whereas in 1881 1·5 per cent. of the Hindu population and 1 per cent. of the Muhammadan population were in primary schools, in 1903-4 the ratios were 1·76 and 1·91 respectively. In 1881, 0·08 of the Hindu population and 0·02 of the Muhammadan population were in secondary Muhammadan education.

schools, while in 1903–4 the proportions were 0·14 and 0·07 per cent. In 1881 one out of every 379,467 Hindus and no Muhammadan took a University degree, but in 1903–4 the ratios were one to 46,534 for Hindus and one to 240,384 for Muhammadans. The Muhammadans have a prejudice against secular education which has not yet been overcome, though the leaders of the community both in Sind and Bombay City are alive to the needs of the time and are doing their best to rouse their fellows to self-help.

Fees. The approximate monthly fees are: college, Rs. 25 to Rs. 75; high school, 10 annas to Rs. 5; middle school, 8 annas to Rs. 3; primary, 6 pies to 8 annas.

General educational results. Whereas in 1881 only 10·2 per cent. of the population of school-going age were under instruction, the ratio rose to 15·45 in 1891 and 15·13 in 1903–4. In 1901, according to the Census results, 11·5 per cent. of the males and 0·9 per cent. of the females, or 6·4 per cent. of the whole population, were able to read and write, while 0·7 per cent. were literate in English. In both male and female education the Pārsīs lead the way and the Muhammadans hold the last place. Among Hindus the Vānīs stand first, the Prabhus second, and the Brāhmans third in general education; but in female education the Prabhus lead the way. Education is most general in Kāthiāwār and the adjoining Districts of Gujarāt, and at the lowest level in Eastern Sind.

Newspapers and books. The oldest native newspaper is the *Bombay Samāchār*, a Gujarātī daily of Bombay, which was founded in 1819. The oldest Marāthī paper is the *Dnyān Prakāsh* of Poona, started in 1849. In 1872–3 there were 4 English and 52 vernacular newspapers, all but one of which were published either in Gujarātī or Marāthī. In 1904 there were 45 English and 257 vernacular newspapers published in British territory, with an estimated circulation of about 280,000. Many of these papers are very short-lived, but new ones are constantly being started. The largest circulation is claimed by the Marāthī *Kesari* of Poona, which is the organ of the extreme section of the Congress party. The most widely-read Gujarātī papers are the *Bombay Samāchār* and the *Gujarātī*, which hold rather more moderate views. The *Rāst Goftār* is the chief anti-Congress organ. The non-political organs number 136 and the political 166. The number of Muhammadan newspapers is 22. The annual publications of the local press average over 1,200, of which 1,100 are original works. They deal largely with religious and social topics, a few being devoted to poetry; the

exact sciences are represented by a very small number of publications.

Medical. The Medical department is controlled by a Surgeon-General, and sanitation is in charge of a Sanitary Commissioner, both officers being members of the Indian Medical Service. A Civil Surgeon stationed at each District head-quarters is responsible for the medical work of the District, while sanitation is entrusted to one of the Deputy-Sanitary Commissioners. The principal medical institutions of the Presidency are to be found in Bombay City. In 1784 there existed three large hospitals in that city: a European hospital in the Fort, a hospital for native troops on the Esplanade, and a convalescent home on Old Woman's Island. The first of these is now represented by the St. George's Hospital; the Jamsetjī Jījībhoy Hospital at Byculla is the successor of the second; and the Convalescent Home has been transferred to the cool heights of Khandāla on the Borghāt. St. George's, or the European General Hospital, dates from the seventeenth century, when 70 beds were established in temporary premises at the Old Court House. It was subsequently transferred to a building near the dockyard, accommodating 140 beds, and in April, 1892, the present building was completed and occupied. It contains 208 beds; and its present nursing staff consists of a lady superintendent, an assistant lady superintendent, 7 charge sisters including a night superintendent, 26 nurses, 7 probationers, a housekeeper and assistant housekeeper. The cost of erection was nearly 6 lakhs; and the annual cost amounts to about Rs. 39,000, of which Government provides one-half and the balance is made up by a contribution of Rs. 2,800 from the Port Trust and public subscriptions. The Jamsetjī Jījībhoy Hospital on Parel Road, to which is attached the Grant Medical College, was constructed in 1843 by the munificence of the first baronet of that name. The Cama Hospital for Females near the Victoria Terminus was opened in 1886, and the Allbless Obstetric Hospital in 1891. The Bai Motlibai Obstetric Hospital and the Sir Dinshaw Mānekjī Petit Hospital for women and children were founded in 1892 by the widow of Naorojī Wadia and the late Sir Dinshaw Petit respectively, and are worked in connexion with the Jamsetjī Jījībhoy Hospital.

Hospitals.

Well-equipped hospitals exist in all important up-country stations, of which the best known is the Sassoon Hospital at Poona, furnished with a special nursing staff. Of the 665 hospitals and dispensaries in 1904 in the Presidency (including

13 in the outlying settlements of Aden and the Persian Gulf), 61 are institutions maintained and managed by Government, 247 are vested in District or municipal boards or guaranteed or maintained by Local or municipal funds with or without the aid of Government or private subscriptions, 305 are entirely maintained at the cost of private individuals or associations, 8 are supported by private subscriptions but receive aid from Government or Local funds, and 44 are railway dispensaries. Over four million persons, including about 67,000 in-patients, are treated at these institutions annually.

Lunatic and leper asylums.

The Presidency contains 7 lunatic asylums, and a central asylum at Yeraoda near Poona is now under consideration. The inmates in 1904 numbered 1,295, the cause of insanity being physical in 496 cases and moral in 133. Excessive indulgence in narcotics and spirits accounted for 176 of these cases. There are 16 institutions in the Presidency for the detention and treatment of lepers, the chief of which is the Mātunga Asylum, Bombay City.

Vaccination.

Vaccination is carried out by a large staff under the direction of the Sanitary Commissioner in all parts of the Presidency. It is not unlikely that intercourse with Europe led to the introduction of small-pox into India. In 1788 a Mr. Farmer inoculated about 1,300 old and young persons, of whom only 2 died of small-pox. Until 1827 no systematic attempt was made to enforce vaccination. Although primary vaccination is compulsory only in Bombay City, Kurla, Bāndra, Karāchi, Lārkāna, Sukkur, and Rohri towns, the process is voluntarily resorted to by numerous parents anxious to protect their children, with the result that, out of a population of 21,539,199, 529,421 were successfully vaccinated in 1903-4, or 24·58 per 1,000. The expenditure on vaccination averages $2\frac{3}{4}$ lakhs per annum, equal to 8 annas 2 pies per head of those vaccinated. The average annual mortality from small-pox was 11,530 during the years 1875-80, and 4,312 during the five years ending 1903-4.

Sale of quinine.

Medical aid of a simple description is available at all post offices in the form of packets of quinine sold at one pice each as a preventative of malarial fever. The use of this febrifuge is steadily gaining in popularity. Over 17,000 packets were thus distributed in 1903.

Sanitation.

Outside Bombay and the few big cities where sanitation is provided by the employment of a duly qualified staff and the construction of expensive water and drainage works, the rural tracts know little of sanitation in its modern sense.

An Act passed in 1889, known as the Village Sanitation Act, empowered local committees supported by voluntary contributions to take measures for improving the sanitary condition of the villages. This Act has been applied to 265 villages; small towns may adopt similar measures on their own initiative when they are under municipal control. It would be difficult to assert that any marked improvement in conservancy has hitherto resulted from the initiative of municipalities or village committees; but improvements in the water-supply can certainly be claimed as a sign of advance in the case of many municipalities. More than this cannot be expected until the mass of the population have learned to connect the prevention of epidemic diseases with cleanly habits and a due regard for the sources of the drinking-water supply, instead of attributing them to the actions of malevolent deities who are to be propitiated by offerings and penances. In 1892 a Sanitary Board, which is now under the presidency of the Surgeon-General, was constituted to advise local bodies on measures for improving local sanitation. For ordinary administrative purposes the Sanitary Commissioner is assisted by five Deputy-Sanitary Commissioners and one Vaccination Superintendent, who are placed in charge of an equal number of circles, and are entrusted with the supervision of vaccination as well as of all sanitary measures. The Superintendent of Vaccination for the Presidency circle works only in Bombay City.

Survey. Topographical.

The topographical survey of the Presidency, conducted by parties under the orders of the Government of India, commenced in the cold season of 1866. By 1904, nearly the whole of the Presidency had been mapped, and maps are obtainable on 1, 2, 4, and 8 inch scales.

Revenue or cadastral.

Revenue or cadastral surveys, undertaken as a basis for land assessment, date from the reign of Akbar, in whose time over 7,000,000 acres in Gujarāt were measured in connexion with the revenue system of Todar Mal (1575). In the time of Shāh Jahān this survey was extended to the Deccan. The first survey for which records are available is that undertaken by the Bijāpur Sultāns at the end of the sixteenth century. This survey formed the basis of revenue assessments till 1817, though the original measurements were partly revised by Sivajī as the country passed under the sway of the Marāthās. In 1835 the systematic survey of the land for revenue purposes was commenced by the Bombay Government and continued till 1901. Every field separately shown in the revenue accounts was entered in the maps prepared by the Survey department,

each map recording the lands of one village. These maps form a permanent record of the land of the Presidency, subject to such periodic revision as is required by the construction of roads and railways, the extension of village sites, the erection of new dwelling-places, and the like. For this work of revision the village officers are being gradually instructed in the art of cadastral measurement under the trained supervision of the inspectors of the Agricultural department, the special survey department having been abolished on the completion of the settlement work entrusted to it. Eventually it is intended that the village officers, on whom the duty falls of entering duly authorized corrections in the village records of tenure and rights, should follow the corrected entry by a corresponding correction of the village map, thus relieving the Agricultural inspectors of the work of keeping these maps up to date.

Forest. Lands under the control of the Forest department are specially demarcated and mapped at the time of forest settlement operations, when the decision is arrived at regarding their retention in or exclusion from forest. Maps of certain valuable Government forest lands are prepared on a scale of 8 inches to the mile. About 3,084 square miles in the Central circle had been mapped in this manner up to 1903-4.

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TABLE I. Distribution of Population, Bombay Presidency, 1901

District or State.	Area in square miles.	Number of towns.	Number of villages.	Total Population. Persons.	Total Population. Males.	Total Population. Females.	Urban Population. Persons.	Urban Population. Males.	Urban Population. Females.	Persons per square mile in rural areas.
Bombay City	22	1	...	776,006*	479,786	296,220	776,006	479,786	296,220	...
Ahmadābād	3,816	12	862	795,967	408,059	387,908	281,572	144,075	137,497	135
Broach	1,467	5	405	291,763	148,528	143,235	71,002	36,780	34,822	150
Kaira	1,595	11	598	716,332	375,647	340,685	132,073	68,006	64,067	366
Pānch Mahāls	1,606	4	689	261,020	132,047	128,973	45,268	22,766	22,502	134
Surat	1,653	8	770	637,017	317,787	319,230	165,153	84,092	81,061	286
Thāna	3,573	7	1,626	811,433	422,192	389,241	90,421	48,901	41,520	202
Total, Northern Division	13,710	47	4,950	3,513,532	1,804,260	1,709,272	786,089	404,620	381,469	199
Ahmadnagar	6,586	8	1,341	837,695	417,768	419,927	91,280	45,955	45,325	113
Khāndesh †	10,041	31	2,614	1,427,382	721,888	705,494	290,317	147,079	143,238	113
Nāsik	5,850	10	1,639	816,504	413,386	403,118	96,742	49,567	47,175	123
Poona	5,349	11	1,178	995,330	502,685	492,645	220,113	114,352	105,761	146
Sātāra	4,825	8	1,335	1,146,559	569,083	577,476	98,760	49,673	49,087	218
Sholāpur	4,541	7	712	720,977	362,777	358,200	154,733	79,170	75,563	125
Total, Central Division	37,192	75	8,819	5,944,447	2,987,587	2,956,860	951,945	485,796	466,149	134
Belgaum	4,649	6	1,070	993,976	502,473	491,503	83,558	42,876	40,682	196
Bijāpur	5,669	5	1,113	735,435	368,023	367,412	75,246	37,647	37,599	116
Dhārwār	4,602	16	1,286	1,113,298	560,947	552,351	225,601	113,807	111,794	193
Kanara	3,945	8	1,281	454,490	236,047	218,443	57,771	29,164	28,607	101
Kolāba	2,131	8	1,476	605,566	304,441	301,125	61,840	32,315	29,525	256
Ratnāgiri	3,998	7	1,301	1,167,927	547,525	620,402	76,914	38,160	38,754	273
Total, Southern Division	24,994	50	7,527	5,070,692	2,519,456	2,551,236	580,930	293,969	286,961	179
Karāchi	11,970	5	628	446,513	248,816	197,697	140,052	80,715	59,337	26
Hyderābād	8,291	7	1,405	989,030	544,420	444,610	103,105	54,862	48,243	106
Lārkāna	5,091	5	708	656,083	354,103	301,980	32,175	17,505	14,670	125
Sukkur	5,403	5	606	523,345	281,847	241,498	100,719	54,414	46,305	78
Thar and Pārkar	13,690	3	666	363,894	202,727	161,167	10,517	5,701	4,816	26
Upper Sind Frontier	2,621	1	390	232,045	129,877	102,168	10,787	6,547	4,240	84
Total Sind	47,066	26	4,403	3,210,910	1,761,790	1,449,120	397,355	219,744	177,611	51
Total British Districts	122,984	199	25,699	18,515,587	9,552,879	8,962,708	3,492,325	1,883,915	1,608,410	122

* According to a special census in 1906 the total population of Bombay City was 977,822, composed of 613,011 males and 364,811 females.

† In 1906 Khāndesh was divided into the two Districts of East and West Khāndesh.

TABLE I. DISTRIBUTION OF POPULATION, BOMBAY PRESIDENCY, 1901 (*continued*)

District or State.	Area in square miles.	Number of towns.	Number of villages.	Total Population.			Urban Population.			Persons per square mile in rural areas.
				Persons.	Males.	Females.	Persons.	Males.	Females.	
Cambay	350	2	88	75,225	38,616	36,609	36,218	18,110	18,108	111
Cutch	7,616	8	937	488,022	244,643	243,379	98,686	49,428	49,258	51
Kāthiāwār	20,882	52	4,163	2,329,196	1,187,901	1,141,295	608,851	306,428	302,423	82
Mahī Kāntha	3,528	6	1,723	361,545	182,368	179,177	31,725	15,796	15,929	94
Pālanpur	8,000	3	1,188	467,271	242,697	224,574	40,725	21,211	19,514	53
Rewā Kāntha	4,980	6	2,817	479,065	245,205	233,860	40,195	19,499	20,696	88
Surat Agency	1,051	2	375	161,342	82,256	79,086	10,104	5,039	5,065	144
Total, Gujarāt Group	46,407	79	11,291	4,361,666	2,223,686	2,137,980	866,504	435,511	430,993	75
Janjīra	324	2	232	85,414	41,251	44,163	9,514	4,736	4,778	234
Jawhār	310	1	106	47,538	24,552	22,986	3,567	1,935	1,632	142
Sāvantvādi	926	1	226	217,732	106,077	111,655	10,213	4,981	5,232	224
Total, Konkan Group	1,560	4	564	350,684	171,880	178,804	23,294	11,652	11,642	209
Akalkot	498	1	102	82,047	41,533	40,514	8,348	4,196	4,152	148
Bhor	1,491	1	483	137,268	69,193	68,075	4,178	2,122	2,056	89
Khāndesh Agency *	1,623	...	426	33,272	17,201	16,071	...	...	...	20
Sātāra Agency	844	1	142	109,660	54,864	54,796	9,512	4,670	4,842	119
Surgāna	360	...	56	11,532	6,061	5,471	...	...	...	32
Total, Deccan Group	4,816	3	1,209	373,779	188,852	184,927	22,038	10,988	11,050	73
Kolhāpur	2,855	9	1,056	910,011	460,874	449,137	109,047	55,763	53,284	280
Southern Marāthā Jāgīrs †	4,003	32	700	694,749	349,687	345,062	207,287	104,186	103,101	122
Savanūr	70	1	22	18,446	9,258	9,188	9,796	4,822	4,974	123
Total, Carnatic Group	6,928	42	1,778	1,623,206	819,819	803,387	326,130	164,771	161,359	187
Khairpur	6,050	1	153	199,313	108,766	90,547	14,014	7,346	6,668	31
Total, Native States and Agencies	65,761	129	14,995	6,908,648	3,513,003	3,395,645	1,251,980	630,268	621,712	86
Bombay Presidency, including Native States	188,745	328	40,694	25,424,235	13,065,882	12,358,353	4,744,305	2,514,183	2,230,122	110
Aden	80	3	...	43,974	30,530	13,444	43,974	30,530	13,444	...

* Includes the Dāngs States, with a population of 18,663, now in Surat Agency.
† Includes Jath and Daflāpur, with a population of 68,665, now forming an Agency of Bijāpur.

TABLE II

STATISTICS OF AGRICULTURE IN THE BOMBAY PRESIDENCY, EXCLUDING NATIVE STATES

(In square miles)

	Presidency Proper.				Sind.			
	1881.	1891.	1901.	1904.	1881.	1891.	1901.	1904.
Total area	Not available.	68,517	68,130	68,475	Not available.	38,158	46,983	41,908
Total uncultivated area		21,995	21,289	21,320		28,209	34,482	33,856
Cultivable but not cultivated		3,419	2,232	2,220		8,127	10,420	10,265
Uncultivable		8,126	7,834	7,825		19,138	22,860	22,593
Forest		10,450	11,221	11,275		944	1,202	1,048
Total cultivated area	33,971	46,522	46,843	47,155	4,539	9,949	12,501	13,052
(*a*) Actually cropped	28,393	39,114	32,813	36,728	2,821	4,507	5,827	5,932
Irrigated from canals	Not available.	173	191	167	Not available.	3,148	4,574	4,738
" from wells and tanks		1,049	882	794		765	22	29
" from other sources			131	139			204	333
Total irrigated		1,222	1,204	1,100		3,913	4,800	5,100
Unirrigated		37,892	31,609	35,628		594	1,027	832
(*b*) Current fallows	6,578	7,408	14,030	10,427	1,718	5,442	6,674	7,120
Total cropped area	28,970	39,966	33,512	37,782	2,946	4,879	6,282	6,444
Cereals :—								
Jowār	8,888	13,003	9,051	9,512	562	722	1,259	1,051
Bājra	5,249	6,952	8,951	7,549	697	1,171	1,401	1,478
Rice	1,900	2,486	2,289	2,444	846	1,103	1,448	1,381
Wheat	2,113	2,989	1,485	2,429	356	634	706	858
Kodra or *harik*	933	395	274	346	...	...	...	...
Nāchni, *nāgli* or *rāgi*	1,323	1,066	797	759	4	2	2	1
Others	1,353	1,289	1,174	1,158	89	42	30	38
Pulses :—								
Tūr	489	819	939	951	...	...	...	...
Gram	848	1,100	501	886	31	43	138	130
Others	1,056	1,664	2,065	2,613	126	244	327	400
Tobacco	76	151	104	113	10	13	13	13
Sugar-cane	76	99	60	89	4	4	4	4
Oilseeds (not forest) :—								
Sesamum (*til*)	449	346	496	795	115	135	156	182
Linseed	238	326	215	566	...	...	...	...
Other oilseeds	895	1,806	848	1,287	...	431	497	457
Fibres :—								
Cotton	2,702	4,769	3,571	5,581	75	164	130	324
Other fibres	76	136	153	237	...	1	1	1
Orchard and garden produce	110	264	257	207	25	81	72	64
Condiments and spices	171	294	272	253	...	72	18	8
Dyes (not forest)	14	8	5	3	6	15	16	9
Drugs and narcotics other than tobacco	10	2	2	1	...	...	...	...
Miscellaneous	1	2	3	3	...	2	64	45
Area cropped more than once	577	852	699	1,054	125	372	455	512

TABLE III. PRICES OF CHIEF GRAINS IN THE BOMBAY PRESIDENCY AT SIX SELECTED CENTRES
(In seers per rupee)

Selected staples.	Names of selected centres.	Average for ten years ending		
		1880.	1890.	1900.
Bājra	Hyderābād	Not available.	17	16
	Ahmadābād	17	17	15
	Bombay City	14	15	13
	Poona	15	16	14
	Dhārwār	19	23	19
	Kārwār	14	15	13
Jowār	Hyderābād	Not available.	20	17
	Ahmadābād	19	19	17
	Bombay City	17	18	14
	Poona	19	20	17
	Dhārwār	22	26	20
	Kārwār	14	18	14
Rice, common	Hyderābād	Not available.	14	9
	Ahmadābād	10	11	10
	Bombay City	11	11	10
	Poona	10	10	10
	Dhārwār	13	13	11
	Kārwār	12	13	10
Gram	Hyderābād	Not available.	16	14
	Ahmadābād	16	18	16
	Bombay City	14	16	12
	Poona	14	16	13
	Dhārwār	12	16	12
	Kārwār	11	14	11

NOTE.—Figures for Hyderābād are not available for the years previous to 1885. Acute famine years, such as 1877 and 1900, have been omitted from these averages.

TABLE IV. FOREIGN MARITIME TRADE OF BOMBAY PRESIDENCY FOR THE YEARS 1890–1, 1900–1, and 1903–4 (EXCLUSIVE OF GOVERNMENT STORES AND TREASURE)
(In thousands of rupees)

Articles.	1890–1.	1900–1.	1903–4.
Imports.			
Animals, living	14,50	18,33	28,21
Apparel	53,10	61,11	88,16
Books and printed matter	9,31	11,87	14,32
Carriages and carts (excluding railway carriages and parts thereof)	*	11,23	19,84
Chemical products and preparations	*	18,53	24,42
Coal and coke	1,31,68	22,51	30,57
Cotton, raw	19,46	66,88	4,78
,, twist and yarn	1,28,52	50,29	54,00
,, manufactures	10,31,10	8,45,33	10,09,59
Drugs and medicines	22,73	26,14	42,39
Dyeing and colouring materials	42,81	49,42	77,05
Glass and glassware	35,15	36,37	52,43
Grain and pulse	*	84,21	5,32

* Not registered.

TABLE IV (*continued*)

Articles.	1890–1.	1900–1.	1903–4.
Matches	12,72	16,77	20,00
Metals and manufactures thereof, including hardware and cutlery	3,10,19	2,72,47	4,27,35
Ivory, including manufactures thereof	34,65	16,77	20,54
Instruments and apparatus of all kinds	12,00	18,40	27,19
Jewellery, including precious stones unset and parts	18,65	50,72	62,47
Liquors	53,11	63,50	73,13
Machinery and mill-work	96,24	77,08	1,36,89
Oils	86,32	1,46,48	1,37,85
Paints and colours and painters' materials	14,47	16,61	18,06
Paper and pasteboard	23,21	24,49	27,65
Provisions	76,18	1,04,25	1,00,29
Railway plant and rolling stock	1,14,04	48,14	46,62
Silk, raw	87,02	85,99	49,65
,, manufactures	67,29	82,77	1,17,46
Spices	27,91	19,57	26,73
Stationery	*	14,65	20,26
Sugar	2,52,81	3,71,41	3,59,28
Tea	31,01	22,78	18,18
Umbrellas	10,35	10,90	11,31
Wood and manufactures thereof	6,89	18,92	32,34
Woollen manufactures	77,47	85,97	1,06,56
All other articles of merchandise	2,23,66	2,20,73	2,49,16
Total	31,24,55	30,91,59	35,40,05
Treasure	17,66,65	9,79,44	18,14,01
Exports.			
Animal bones	*	49,20	24,37
Apparel	4,79	22,22	24,38
Cotton, raw	13,22,33	7,93,19	20,81,49
,, twist and yarn	6,21,79	4,07,32	8,35,70
,, manufactures	2,36,94	1,72,64	2,04,52
Dyeing and tanning materials	12,78	49,58	48,84
Grain and pulse	6,35,21	85,52	11,22,41
Gums and resins	6,05	13,19	15,00
Hemp	2,27	20,71	27,77
Hides and skins, raw	4,39	1,07,85	48,00
,, ,, dressed or tanned	51,67	1,00,65	65,58
Horns	*	10,45	6,95
Metals and manufactures thereof	8,00	42,09	52,39
Oils	3,50	15,29	15,51
Oilseeds	5,01,03	4,55,64	8,59,46
Opium	3,28,19	3,33,30	3,42,94
Provisions	38,50	33,70	37,62
Spices	9,40	16,49	25,76
Sugar	22,77	11,17	6,26
Tea	9,75	28,21	22,26
Wool, raw	92,91	1,15,12	1,54,97
Woollen manufactures	4,54	18,10	13,82
All other articles of merchandise	3,39,11	1,46,72	1,67,65
Total	42,55,92	30,48,35	62,03,55
Treasure	1,70,77	6,53,57	5,38,99

* Not registered.

TABLE V

Trade of the Bombay Presidency with other Provinces and States of India for 1890–1, 1900–1, and 1903–4

(In thousands of rupees)

	By sea (exclusive of Government stores and treasure).			By road and rail.		
	1890–1.	1900–1.	1903–4.	1890–1.	1900–1.	1903–4.
Imports.						
Animals, living	1	8	3	2,36	35,68	7,39
Apparel	50	52	38	*	23,92	26,50
Coal and coke	52	1,05,28	88,85	13,73	44,72	31,95
Coco-nuts, coco-nut copra	49,50	56,62	58,71	*	...	...
Cotton, raw	2,95	7,47	2,97	6,74,12	7,36,93	14,16,10
" piece-goods	1,63	2,93	2,03	37,29	27,90	37,64
" twist and yarn	1,26	28	5	2,86	1,73	1,95
Drugs and medicines	14	1,64	1,76	6,97	15,21	12,33
Dyes and tans	6,67	4,29	1,25	30,10	37,00	29,18
Grain and pulse	1,15,98	6,82,40	1,53,62	4,29,27	5,97,64	8,82,40
Hay, straw, and grass	*	2,21	1,76	*	12,77	5,25
Hemp	4	...	15	*	12,95	14,21
Hides and skins (raw and dressed)	68	65	1,22	15,98	55,45	43,98
Jute and manufactures thereof	67,30	60,69	71,40	3,43	4,39	13,39
Leather, including wrought	10	1	...	6,49	18,39	26,73
Metals and manufactures thereof	1,81	54	1,04	6,93	2,66,29	31,64
Oils	16,32	27,55	32,44	2,22	8,96	11,07
Oilseeds	4,93	6,57	1,03	3,04,21	3,94,66	5,84,23
Opium	...	...	...	1,64,97	2,24,18	2,32,00
Provisions	3,20	4,90	4,25	92,13	1,85,98	82,34
Railway plant and rolling stock	*	4	...	9,06	11,57	11,60
Spices	29,23	39,23	48,29	29,64	40,62	39,52
Sugar	11,80	2,47	2,37	68,69	77,71	45,24
Tea	4,32	16,66	15,15	3,71	5,57	9,36
Tobacco	2,80	1,02	62	5,37	11,58	4,06
Wood and manufactures thereof	34,94	36,01	30,23	*	8,68	15,67
Wool and manufactures thereof	53	58	26	43,25	68,74	71,37
All other articles of merchandise	43,82	28,96	27,44	67,96	82,30	77,77
Total	4,00,98	10,89,60	5,47,30	20,20,74	30,10,52	37,64,87
Treasure	27	33	...	*	3,36,32	5,16,91
Exports.						
Apparel	4,01	4,00	3,05	*	26,79	43,16
Cotton, raw	39,11	15,04	8,18	12,43	18,84	17,06
" piece-goods	68,00	98,98	1,01,63	4,68,71	5,46,73	7,25,44
" twist and yarn	89,13	1,01,89	76,80	1,07,41	1,63,54	2,56,87
Dyes and tans	3,49	4,63	4,57	35,24	35,46	47,81
Grain and pulse	16,00	39,44	45,09	12,53	1,39,82	46,31
Hides and skins	1,15	1,26	1,60	17,07	45,28	26,42
Jute and manufactures thereof	82	1,43	1,03	25,13	23,64	29,14
Leather	1	24	48	13,76	30,40	59,31
Liquor	1,05	2,07	1,85	53,67	54,45	61,92
Metals and manufactures thereof	21,06	31,25	20,65	1,50,45	2,46,18	4,00,31
Oils	57	16,66	14,89	40,52	61,51	62,61
Provisions	7,52	12,99	14,90	91,06	1,11,30	1,28,26
Railway plant and rolling stock	*	8	...	79,40	94,47	1,12,32
Salt	62,38	56,04	37,30	1,04,31	1,41,79	1,26,43
Silk, raw	5	45	14	16,94	23,69	33,13
" piece-goods	2,55	4,25	2,13	5,63	17,11	17,61
Spices	3,99	6,26	6,91	40,14	48,13	56,86
Sugar	2,69	4,58	5,36	71,90	2,11,15	2,53,18
Tobacco	1,11	67	...	51,70	25,89	25,52
Wool and manufactures thereof	5,23	1,71	1,62	13,56	27,27	29,16
Other articles of merchandise	53,80	54,68	55,12	81,75	1,09,15	1,82,42
Total	3,83,72	4,58,60	4,03,30	14,93,31	22,02,59	27,41,25
Treasure	4,74	2,70	5,73	*	8,92,59	7,57,61

* Not registered.

TABLE VI

PRINCIPAL SOURCES OF PROVINCIAL REVENUE IN THE BOMBAY PRESIDENCY

(In thousands of rupees)

Sources of revenue.	Average for ten years ending March 31, 1890.		Average for ten years ending March 31, 1900.		Year ending March 31, 1901.		Year ending March 31, 1904.	
	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.
Partly Imperial and partly Provincial.								
Land revenue	4,06,13	2,57,93	4,50,99	2,74,57	3,92,34	3,14,76	4,75,54	3,12,33
Stamps	45,65	30,79	57,44	43,08	58,87	44,15	61,48	46,11
Excise	82,56	40,03	1,07,89	26,97	1,01,31	25,33	1,19,99	30,00
Provincial rates	...	...	...	...	...	...	34,04	...
Assessed taxes	20,97	8,75	37,21	17,80	37,28	18,10	36,32	17,89
Forest	22,79	11,39	31,28	15,64	29,62	14,81	27,52	13,76
Registration	3,71	2,13	5,97	2,99	6,10	3,05	5,54	2,77
Other sources	49,07	25,88	58,31	29,16	49,18	26,41	58,34	30,81
Total	6,30,88	3,76,90	7,49,09	4,10,21	6,74,70	4,46,61	8,18,77	4,53,67
Mainly Imperial.								
Salt	1,63,03	49	2,28,34	57	2,33,89	74	1,86,59	1,03
Customs	33,24	57	1,23,94	74	1,93,59	1,09	2,35,56	94
Interest on cesses to local bodies	20,36	86	18,92	3,13	17,57	3,44	28,84	5,74
Irrigation	*1,45	1	16,95	24	23,57	32	†31,04	48
State railway gross receipts	...	...	‡51,11	1,37	...	...	...	...

* From 1889-90 only. † Does not include portion of Land Revenue due to Irrigation.
‡ Shared with Provincial Government from 1892-3 to 1899-1900 only.

TABLE VII

Principal Heads of Provincial Expenditure in the Bombay Presidency

(In thousands of rupees)

	Average for ten years ending March 31, 1890.	Average for ten years ending March 31, 1900.	Year ending March 31, 1901.	Year ending March 31, 1904.
Opening balance . . .	11,01* 43,99†	58,41 48,73	...	34,00
Charges in respect of collection (principally Land Revenue and Forests) . .	86,76	78,21	82,66	76,82
Salaries and expenses of Civil Department:—				
(*a*) General administration	12,48	14,27	15,27	15,82
(*b*) Law and justice .	50,59	52,07	57,38	55,03
(*c*) Police . . .	46,93	56,86	65,09	63,43
(*d*) Education . .	13,01	17,05	17,31	19,81
(*e*) Medical . . .	12,46	21,82	31,94	19,53
(*f*) Other heads . .	3,74	5,72	6,67	6,36
Pensions and miscellaneous civil charges . . .	20,58	27,52	34,04	44,33
Famine relief . . .	6	50	...	2
Irrigation	26	60	14	13
Public works . . .	36,50	32,90	27,29	14
Other charges and adjustments	90,81	1,14,60	1,14,41	1,61,67
Total expenditure	3,74,18	4,22,12	4,52,20	4,63,09
Closing balance . . .	58,41‡ 48,73§	27,34	...	32,77

* Actual at commencement of each period. † Average.
‡ Actual at close of each period. § Average.

TABLE VIII

Annual Gross Yield of Import Duties on the Chief Articles imported into the Bombay Presidency (excluding Sind) from 1894–5 to 1902–3

Chief articles.	Amount of duty collected in									
	1894-5.	1895-6.	1896-7.	1897-8.	1898-9.	1899-1900.	1900-1.	1901-2.	1902-3.	1903-4.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Liquors	18,23,842	19,90,497	19,45,711	19,84,944	21,76,250	21,92,813	21,46,222	22,01,281	22,73,939	24,28,294
Fruits and vegetables	2,54,354	2,45,682	1,91,045	2,19,963	1,78,067	2,31,673	2,57,805	2,52,850	1,92,333	2,68,658
Sugar	8,78,258	8,85,118	8,75,618	12,26,152	10,95,858	9,34,680	18,20,726	22,52,151	18,03,456	12,88,438
Dyeing materials	2,69,017	3,50,645	3,07,163	3,37,794	3,58,035	2,85,887	2,57,876	3,11,222	3,04,926	3,88,162
Hardware and cutlery	3,18,044	3,03,833	3,23,280	2,40,461	2,49,921	2,99,950	3,08,551	3,05,338	3,64,766	4,02,460
Oils	11,63,276	8,41,668	12,97,787	19,48,665	16,72,790	9,88,012	16,05,975	16,82,807	18,91,143	15,34,818
Apparel	2,97,263	3,12,031	2,93,610	1,78,910	2,22,117	2,43,829	2,38,238	2,71,476	3,16,165	3,36,959
Cotton goods	12,28,363	31,80,416	25,31,445	21,47,932	23,59,105	26,10,665	23,34,855	30,05,019	24,09,692	27,89,164
Silk	9,59,383	10,69,095	8,62,406	6,72,563	7,34,346	6,19,861	9,22,310	8,57,731	7,84,290	8,18,314
Woollen goods	3,16,673	3,49,795	3,56,092	1,78,503	2,45,807	3,12,908	3,63,447	4,16,133	3,05,930	4,34,115
All other articles	62,61,639	68,08,642	56,37,093	61,78,456	50,60,718	40,86,166	36,92,877	52,53,892	67,63,013	70,65,297
Total gross import duty	1,37,70,112	1,63,37,422	1,46,21,250	1,53,14,343	1,43,53,014	1,28,06,444	1,39,48,882	1,68,09,900	1,74,09,653	1,77,54,679

TABLE IX. Income and Expenditure of Bombay District Municipalities

	Average for ten years 1891-1900.	1900-1.	1903-4.
Income from—	Rs.	Rs.	Rs.
Octroi (gross)	21,64,370	22,89,129	26,96,049
Tax on houses and land	5,48,917	6,56,386	7,05,213
Other taxes	8,76,951	10,39,088	13,32,431
Rents	77,963	81,971	94,677
Loans	5,20,259	2,13,607	99,173
Other sources†	17,27,022	16,51,565	21,76,572
Total income	59,15,482	59,31,746	71,04,115
Expenditure on—			
Administration	4,55,343	5,30,920	5,52,938
Public safety	2,46,634	2,44,655	2,50,372
Water-supply and drainage—			
(*a*) Capital	4,98,329	1,33,621	4,15,822
(*b*) Maintenance	2,78,564	3,01,747	3,36,865
Conservancy	8,85,152	9,92,140	10,02,791
Hospitals and dispensaries	2,73,854	3,22,747	3,10,099
Public works	5,21,983	4,44,283	7,27,353
Education	6,76,026	7,01,998	7,99,723
Refunds (octroi)	7,22,683	7,00,196	8,63,013
Miscellaneous	14,83,770	16,94,527	15,46,015
Total expenditure	60,42,338	60,66,834	68,04,991

NOTE.—The Bombay City municipality had an income in 1903-4, including extraordinary, of about 4 crores of rupees.

TABLE X

Income and Expenditure of Bombay District Boards

	Average for ten years 1891-1900.	1900-1.	1903-4.
Income from—	Rs.	Rs.	Rs.
Provincial rates	25,81,731	22,55,505	29,27,456
Education	2,10,896	1,30,262	1,31,258
Medical	24,661	12,622	16,017
Public works	1,09,757	63,278	68,296
Contributions	9,79,651	10,53,069	10,92,841
Pounds	1,60,884	84,187	1,01,885
Ferries and roads	4,00,617	3,87,158	4,03,581
Other sources	82,343	98,792	58,823
Total income	45,50,540	40,84,873	48,00,157
Expenditure on—			
Administration	1,39,735	1,45,490	1,52,234
Education	14,99,736	15,12,908	16,03,777
Medical	3,02,042	3,33,825	2,94,947
Public works	23,85,032	17,09,964	22,39,613
Contributions	95,534	84,381	1,16,724
Miscellaneous	2,77,944	2,76,370	1,73,818
Total expenditure	47,00,023	40,62,938	45,81,113

TABLE XI. POLICE STATISTICS IN THE BOMBAY PRESIDENCY (BRITISH DISTRICTS)

	1881.	1891.	1901.	1904.
Supervising Staff.				
District and Assistant Superintendents	39	45	52	52
Inspectors	78	92	102	109
Subordinate Staff.				
Sub-Inspectors	3,110	3,675	397	408
Head constables			4,347	4,396
Constables	17,082	18,820	19,367	19,540
Municipal police*:—				
Officers	184†	20	51	49
Men	1,256†	148	286	282
Expenditure . Rs.	37,31,421	41,71,188	51,52,714	53,04,097

* Figures under this head include cantonment and water police, who are paid wholly from other than Imperial and Provincial revenues.
† Including 137 railway officers and 879 men.

TABLE XII. STATISTICS OF COGNIZABLE CRIME IN THE BOMBAY PRESIDENCY (BRITISH DISTRICTS)

Particulars.	Average for five years ending 1901.	1904.
Number of cases reported	78,920	90,511
" " decided in the criminal courts	55,244	68,620
" " ending in acquittal or discharge	8,560	7,736
" " " conviction	47,508	60,884

TABLE XIII. JAIL STATISTICS IN THE BOMBAY PRESIDENCY (BRITISH DISTRICTS)

	1881.	1891.	1901.	1904.
Number of Central jails	1	1	3	3
Number of District jails	26	20	14	14
Number of subsidiary jails (lock-ups)	78*	27*	238	238
Average daily jail population :—				
(*a*) Male:				
In Central jails	1,280	1,085†	4,057†	3,007
In other jails	8,117	6,467†	7,531†	5,764
(*b*) Female:				
In Central jails	...	24†	109†	98
In other jails	449	223†	290†	189
Total	9,846	7,799	11,987	9,058
Rate of jail mortality per 1,000	42	32	35	20
Expenditure on jail maintenance ‡ . Rs.	6,12,000	5,24,000	8,48,000	6,13,000
Cost per prisoner . Rs.	62	67	71	68
Profits on jail manufactures Rs.	2,04,000	1,46,000	1,08,000	2,09,000
Earnings per prisoner . Rs.	21	19	9	23

* This excludes numerous lock-ups, details of which are not available.
† The figures for 1891 and 1901 include the average number of prisoners confined in lock-ups. ‡ Excluding inspection charges.

TABLE XIV. COLLEGES, SCHOOLS, AND SCHOLARS IN THE BOMBAY PRESIDENCY

Class of institutions.		1890-1.			1900-1.			1903-4.		
		Number of institutions.	Scholars.		Number of institutions.	Scholars.		Number of institutions.	Scholars.	
			Males.	Females.		Males.	Females.		Males.	Females.
Public.										
Arts colleges	British Districts	7	1,201	8	7	1,671	22	7	1,870	34
" "	Native States	2	80	...	2	132	1	3	234	...
Professional colleges	British Districts	4	554	12	5	979	32	5	1,271	45
" "	Native States	...	...	...	...	...	...	...	...	...
Secondary schools:—										
High schools	British Districts	69	18,217	1,418	103	21,319	2,343	100	20,448	2,195
" "	Native States	12	2,888	21	22	4,224	...	25	4,341	...
Middle schools	British Districts	252	12,559	2,463	253	12,009	2,481	261	11,665	2,757
" "	Native States	68	4,016	19	100	5,027	16	101	4,371	14
Primary schools:—										
Upper schools	British Districts	6,773	93,414	5,078	6,601	105,440	8,111	6,874	87,184	7,778
" "	Native States		34,529	1,716		39,572	2,946		36,249	2,662
Lower schools	British Districts		242,896	42,511		223,514	50,291		199,528	47,290
" "	Native States	2,088	75,791	10,466	2,435	69,378	14,376	2,405	64,434	12,656
Training schools	British Districts	11	625	148	15	536	203	17	670	216
" "	Native States	4	83	25	4	55	27	2	58	23
Other special schools	British Districts	26	1,766	23	30	2,646	48	35	2,693	43
" " "	Native States	3	181	...	3	231	...	7	578	...
Private.										
Advanced	British Districts	78	1,149	34	49	1,582	108	73	2,409	521
"	Native States	6	110	...	34	840	327	19	490	...
Elementary	British Districts	1,989	42,870	4,994	1,843	35,161	5,384	1,987	34,762	6,859
"	Native States	549	16,861	149	589	17,353	2,972	494	15,306	4,534
	Total British Districts	9,209	415,251	56,689	8,906	404,857	69,023	9,359	362,500	67,738
	Total Native States	2,732	134,539	12,396	3,189	136,812	20,665	3,056	126,061	19,889
	Total Presidency	11,941	549,790	69,085	12,095	541,669	89,688	12,415	488,561	87,627

TABLE XV

UNIVERSITY RESULTS, BOMBAY PRESIDENCY

Passed in	1881.		1891.		1901.		1904.	
	British Districts.	Native States.	British Districts.	Native States.	British Districts.	Native States.	British Districts.	Native States.
Matriculation	382	39	611	118	923	207	1,130	362
First or Intermediate in Arts, Science, or Law	226	2	461	76	982	168	994	239
Ordinary Bachelor's degree	92	...	176	6	277	33	452	42
Higher or special degrees	4	...	2	...	14	2	24	1

TABLE XVI Educational Finance, Bombay Presidency

	Expenditure on institutions maintained or aided by public funds from									
	Provincial revenues.*		District and municipal funds.		Fees.		Other sources.		Total.	
	1900–1.	1903–4.	1900–1.	1903–4.	1900–1.	1903–4.	1900–1.	1903–4.	1900–1.	1903–4.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Arts and professional colleges:—										
British Districts	1,70,695	2,03,862	15,474	14,050	2,08,555	2,76,251	46,712	52,157	4,41,436	5,46,320
Native States	33,741	66,179	...	...	6,058	10,200	119	110	39,918	76,489
Training and special schools:—										
British Districts	2,68,087	2,69,148	75,935	78,326	23,101	29,399	1,17,827	1,70,942	4,84,950	5,47,815
Native States	34,893	31,974	...	...	95	131	684	820	35,672	32,925
Secondary boys' schools:—										
British Districts	3,40,067	3,58,370	40,221	47,054	6,08,218	6,53,881	3,00,864	2,94,865	12,89,370	13,54,170
Native States	2,35,243	2,15,254	5,150	6,263	1,43,600	1,34,049	5,183	13,441	3,89,176	3,69,007
Primary boys' schools:—										
British Districts	7,45,222	9,54,218	10,45,819	9,81,531	2,90,256	2,74,408	2,64,123	3,22,526	23,45,420	25,32,683
Native States	5,61,201	5,58,525	42,235	45,986	61,200	57,957	5,709	4,729	6,70,345	6,67,197
Girls' schools:—										
British Districts	1,59,648	1,83,401	1,13,275	1,14,009	1,21,704	1,35,624	2,73,689	3,32,638	6,68,316	7,65,672
Native States	93,095	91,839	5,003	4,813	268	125	1,326	2,644	99,692	99,421
Total British Districts	16,83,719	19,68,999	12,90,724	12,34,970	12,51,834	13,69,563	10,03,215	11,73,128	52,29,492	57,46,660
Total Native States	9,58,173	9,63,771	52,388	57,062	2,11,221	2,02,462	13,021	21,744	12,34,803	12,45,039
Total Presidency	26,41,892	29,32,770	13,43,112	12,92,032	14,63,055	15,72,025	10,16,236	11,94,872	64,64,295	69,91,699

* 'State revenues' in the case of Native States.

TABLE XVII

MEDICAL STATISTICS IN THE BOMBAY PRESIDENCY (INCLUDING NATIVE STATES BUT EXCLUDING ADEN)

	1881.	1891.	1901.	1904.
Hospitals, &c.				
A. State or State-aided Institutions.				
Number of civil hospitals and dispensaries	181	249	232	302
Average daily number of—				
(*a*) In-patients . . .	1,741·0	2,069·3	2,371	2,681
(*b*) Out-patients . . .	12,802·4	17,500·2	14,024	18,842
Income from—				
(*a*) Government payments Rs.	6,86,712	7,90,940	6,73,644	7,30,677
(*b*) Local and municipal payments . . . Rs.	1,52,468	2,45,029	2,74,933	4,94,214
(*c*) Fees, endowments, and other sources . . Rs.	44,145	86,965	1,11,732	1,57,180
Expenditure on—				
(*a*) Establishment . . Rs.	5,70,297	7,17,802	5,08,855	6,74,328
(*b*) Medicines, diet, buildings, &c. . . . Rs.	2,75,422	3,15,875	4,58,922	6,75,460
B. Private, Railway, Municipal, &c., Institutions.				
Number of institutions . .	3	9	381	363
Average daily number of—				
(*a*) In-patients . . .	14	30	...	...
(*b*) Out-patients . . .	28	59	...	...
Lunatic Asylums.				
Number of asylums . . .	5	6	6	7
Average daily number of—				
(*a*) Criminal lunatics . .	88	104	100·1	110
(*b*) Other lunatics . . .	544	609	669·5	701
Income from—				
(*a*) Government payments Rs.	96,291	1,00,859	1,38,160	1,13,071
(*b*) Fees and other sources Rs.	11,405	16,182	23,998	23,547
Expenditure on—				
(*a*) Establishment . Rs.	42,917	42,234	49,538	54,495
(*b*) Diet, buildings, &c. Rs.	52,217	61,699	76,799	82,123
*Vaccination.**				
Population among whom vaccination was carried on . . .	23,013,619	23,417,205	26,902,263	21,539,199
Number of successful operations	580,610	791,501	658,486	529,421
Ratio per 1,000 of population .	25	34	25	24,58
Total expenditure on vaccination . . . . . Rs.	2,25,161	2,80,724	3,45,924	2,69,068
Cost per successful case . Rs.	0-6-2	0-5-8	0-8-4	0-8-2

* The vaccination statistics are for the financial year, while the remaining figures in this table are for the calendar year.

TRIBES, MOUNTAINS, RIVERS, LAKES AND CANALS, AND HISTORIC AREAS

Origin and meaning of the name.

Bhīl Tribes, The.—The name Bhilla seems to occur for the first time about A.D. 600. It is supposed to be derived from the Dravidian word for a bow, which is the characteristic weapon of the tribe known as Bhīl. The Bhīls seem to be the 'Pygmies' of Ctesias (400 B.C.), and the *Poulindai* and *Phyllitae* of Ptolemy (A.D. 150); but the name by which they are at present known cannot be traced far back in Sanskrit literature. The Pulinda tribe is mentioned in the Aitareya Brāhmana and in the edicts of Asoka, but its identification with the Bhīls rests on much later authorities. The Bhīls are often mentioned as foes or allies in the history of Anhilvāda, and they preceded the Musalmāns at both Ahmadābād and Chāmpāner. To this day it is necessary to the recognition of certain Rājput chiefs that they should be marked on the brow with a Bhīl's blood. In unsettled times the Bhīls were bold and crafty robbers, and the Marāthās treated them with great harshness. The first step to their reclamation was the formation of the Bhīl Agencies in the Khāndesh District of the Bombay Presidency in 1825.

Geographical distribution.

The home of the Bhīls is the hilly country between Abu and Asīrgarh, from which they have spread westward and southward into the plains of Gujarāt and the Northern Deccan, and lately, under pressure of famine, even to Sind. The Bhīls have been settled in this part of India from time immemorial. They are found in considerable numbers only in the Bombay Presidency, Rājputāna, and Central India. At the Census of 1901 the Bhīls numbered 1,198,843, distributed as follows:—

Bombay	569,842
Rājputāna	339,786
Central India	206,934
Elsewhere	82,281

General characteristics.

Some of the Bhīl clans have advanced a claim to be considered as Rājputs, but it is only within the last eighty years that the settlement and opening up of the country has tended

strongly to merge them in the general Hindu population. It is not easy to describe a tribe that includes every stage of civilization, from the wild hunter of the hills to the orderly and hard-working peasant of the lowlands. A further difficulty arises from the fact that the name Bhīl is often given to half-wild tribes, such as Chodhrās, Dhānkās, Dhodias, Kāthodis, Konknās, and Vārlis, who do not seem to be true Bhīls. The typical Bhīl is small, dark, broad-nosed, and ugly, but well built and active. The men wear a cloth round their long hair, another round their waist, and a third as a wrap, and carry a bow and arrows or an axe. The women dress like low-class Hindus, but plait their hair in three tails, and wear large numbers of brass or tin rings on their arms and legs. They live in huts of wattle-and-daub surrounded by a bamboo fence, each standing by itself on high ground. Each settlement has a hereditary headman (*gamti*), who is under the chief (*naik*) of the district, to whom all owe military service. When necessity arises, they are gathered by a peculiar shrill cry known as *kulki*. Scattered over all these local divisions are more than 40 *kūls* or exogamous clans, each of which has a totem tree or animal. The true Bhīls do not appear to have any endogamous sub-tribes, though such seem to have arisen in Khāndesh owing to differences of dialect, the adoption of Hindu customs in the matter of food, or conversion to Islām. Whether the Bhīls ever possessed any language of their own is unknown. At present they all speak a mixed dialect of Gujarātī and Rājasthānī, with some borrowing from Marāthī, and a slight admixture of Mundā words.

The Bhīls are hunters and woodmen; but most now grow a little rice or maize to eke out their diet of game, roots, and fruits, and keep goats and fowls for feasts and sacrifices. In times of difficulty, they will eat beef, but not the horse, rat, snake, or monkey. They are truthful and honest, but thriftless, excitable, and given to drink. They pay no respect to Brāhmans or to the Hindu gods, except Devī, nor do they build temples. They reverence and swear by the moon (Bārbij), but chiefly worship Vāghdeo the 'tiger-god' and ghosts, for which every settlement has its *devasthān* or 'god-yard' with wooden benches for the ghosts to perch on. Here they offer goats and cocks with much feasting and drinking, and dedicate earthen horses and tigers in fulfilment of a vow. They have mediums called *badva*, of their own tribe, whose business it is to find the spirit or the witch that has caused any calamity. Witches are detected by swinging the suspected woman from a tree or by

Bombay.

throwing her into a stream. Each group of villages has a *dholi* or bard, who supplies music at weddings and funerals, and keeps the genealogies of the leading Bhīls. Each village also has a *rāval*, whose chief duty is to officiate at a funeral feast (*kaita*). They celebrate the Holī at the spring equinox with feasting and drinking, at which every man of the village must be present. At this festival fire-walking is practised in fulfilment of vows, and a sort of mock fight takes place between men and women. The Dasahra or autumn equinox and the Divāli are kept with dance, song, and feasting. In the month of Shrāvan a stone representing the small-pox goddess is worshipped, and the first of the young grass is cut, with feasting in the 'god-yard.' The harvest (October–November) is marked by a feast in honour of Bābādeo, the 'father-god,' who has a special seat at Deogarh Bāriya in the Rewā Kāntha Agency, where the *badvas* resort for a month in every twelfth year. Occasional sacrifices known as *in* or *jatar* are offered to stay an epidemic. Another method is to pass on a scapegoat and a toy cart, into which the disease has been charmed, from village to village. The women steal and kill a buffalo from the next village as a charm for rain. The chief domestic rites take place at marriage and death. Marriage is commonly between adults, and may be arranged either by themselves or by the parents. There is a sort of Gretna Green at Posina in Mahī Kāntha. Betrothal is sealed with draughts of liquor. A bride price is usual, but may be paid off by personal service for a term of years, during which husband and wife are allowed to live together. Sexual licence before marriage is connived at, and the marriage tie is loose; not only is divorce or second marriage easy for the husband, but a wife may live with any other man who is willing to keep her and to repay to her husband his marriage expenses. Widow marriage is common, especially with the husband's younger brother. The dead are disposed of either by burning or by burial. The former method is the commoner, but the latter seems the more primitive, and is always employed in the case of young children or those who have died of small-pox. Cooked food is placed on the bier and left half-way to the burning or burial-ground. In case of burial the head is laid to the south and food put in the mouth. The grave of a chief is opened after two months and the face of the dead man painted with red lead, after which the grave is again closed. A stone carved with a human figure on horseback is set up in the 'god-yard' to the memory of any leading Bhīl. A death-dinner (*kaita*) takes place as soon after the death as the family can

afford it, the guests sometimes numbering two or three thousand. Throughout the feast the *rāval* sings songs, and offerings are made to a small brazen horse which is held on a salver by the chief mourner, and is the vehicle for the ghost of the dead man. The Bhīls believe firmly in omens, witchcraft, and the evil eye, to which last they trace most cases of sickness.

Central India. In Central India there are more than 100 exogamous divisions of the Bhīls. They may in theory marry freely outside the exogamous section, but in practice the Mānpur and Sātpurā Bhīls rarely intermarry. Tattooing is common, but the sept totem may not be represented. The hereditary headman is known as *tarvi*. When performing the death ceremony, he wears a *janeo*, made of coarse thread. This is the only occasion on which the sacred thread is worn. The Bhīls here seldom eat beef.

Rājputāna. In Rājputāna the Bhīls differ little from the main body of the tribe found within the limits of the Bombay Presidency. They are most numerous in the south and south-west, but are found everywhere except in the eastern States. In 1901 two-thirds of them were in the two States of Mewār and Bānswāra. The practice of marking the brow of a new Rājput chief, alluded to above, was formerly followed in Mewār, Dungarpur, and Bānswāra, but fell into desuetude in the fifteenth century. The reclamation of the Rājputāna Bhīls was contemporaneous with the formation of the Khāndesh Bhīl Agencies, and was followed sixteen years later by the establishment of the Mewār Bhīl Corps, which was one of the few native regiments in Rājputāna that stood by their British officers during the Mutiny. Service in the Mewār Bhīl Corps is now so popular that the supply of recruits largely exceeds the demand. The Mewār Bhīls consider themselves superior to the Central Indian Bhīls, and will neither eat nor intermarry with them. With the Gujarāt Bhīls, on the other hand, intermarriage is permitted.

The Bhilālas. The Bhilālas, or mixed Bhīl and Rājput tribes, numbered 144,423 in 1901, being found for the most part within the limits of Central India, in the States of the Bhopāwar Agency. The higher classes of Bhilālas differ in no essential points from Hindus of the lower orders, on whom, however, they profess to look down. They have neither the simplicity nor the truthfulness of the pure Bhīl. They are the local aristocracy of the Vindhyas, and the so-called Bhūmiā landowners in Bhopāwar are all of this class, the Rājā of Onkār Māndhāta in the Central Provinces being regarded as their leading representative. In

Central India the Bhilālas consist of two main groups, the Badī and Chhoti, which do not intermarry, but are divided into numerous exogamous septs. They eat flesh, except beef, but their usual food is millet bread and jungle produce, with *rabri* or maize boiled in buttermilk. Like the Bhīls, they are firm believers in omens and witchcraft. Their most sacred oath is by Rewā *māta*, the tutelary goddess of the Narbadā river.

Kolīs.—The various tribes that bear this name differ very greatly in character and origin. They are chiefly found in the Bombay Presidency, throughout Gujarāt, and in the northern parts of the Deccan and Konkan, and also in the States of Hyderābād, Rājputāna, and Central India. In the Punjab and United Provinces large numbers of Korīs or Kolīs are found, who are chiefly weavers or labourers. It is doubtful whether these are connected in any way with the Kolīs of Western and Central India. At the Bombay Census of 1901, 1,714,921 persons returned themselves as Kolīs, and many of the castes that bear other names have a strain of Kolī blood, whereas in Western Gujarāt the Kolīs have so strong an infusion of northern blood as to be scarcely distinguishable from Rājputs. In the east of Gujarāt no very clear line can be drawn between them and the BHĪLS; and in the Konkan the Kolī passes into the Kunbī by insensible gradations. No satisfactory history or derivation of the name Kolī has yet been given. The *Kolas* or *Kohsarpas* of Sanskrit epic poetry are probably the Kols of the Eastern Vindhyas, and the *Kaulika* of the Panchatantra is a weaver like the Korīs of Northern India. The name Kolī does not seem to occur before the Musalmān period, and is disliked by the tribe in Rājputāna and Northern Gujarāt. These facts lend colour to the suggestion that it is derived from the Turkī word *kuleh*, a 'slave.' But, whatever be the origin of the name, it seems probable that the oldest element in the caste represents the aborigines of the open country and the coast, as distinguished from the primitive tribes of the hills and forests.

In Gujarāt there are four leading divisions of Kolīs, which do not as a rule eat together or intermarry. Of these, the highest and most widely spread are the Talabdas, also called Dhārālas, who not infrequently intermarry with Rājputs, and are reputed peaceable and skilful husbandmen. Next to them come the Chunvāliyās of Viramgām, whose leaders are sometimes recognized as Rājputs, while the rank and file differ but little from Bhīls. Though now mostly settled, they were known

down to 1825 as daring plunderers. The Khānts also differ little from Bhīls, and had their first home in Rewā Kāntha, whence a large body was transported to Girnār in the fourteenth century. The Pātanvādiyas of the district round Old Anhilvāda are looked down upon by the other sections because they eat buffalo meat, and closely resemble Bhīls and Vāghris. The strain of northern blood is strongest in Kāthiāwār, where the Kolīs differ hardly at all from the Bābriās, Mers, Rāvalias, and Māhiyās, and join in the worship of the Baloch goddess Hinglāj. There is a functional sub-caste of Kolī fishers and boatmen, settled all along the coasts of Kāthiāwār and Gujarāt, which is sometimes classed as separate from, and sometimes as a subdivision of, the Māchhis or the Khārvās. All these sections of Kolīs are subdivided into exogamous clans, many of which bear Rājput names. Gujarāt Kolīs eat fish, flesh, and opium, drink liquor, and smoke tobacco. They worship chiefly the gods Indra and Hātmal, the goddesses Hinglāj and Khodiār, and the river Mahī, and have a strong belief in ghosts and omens. Children are not married before twelve years of age. Marriages are arranged by the parents, who pay great respect to certain omens. Widows may remarry, and so may unwidowed wives with the first husband's consent. In some parts marriage of a widow with her husband's younger brother is not uncommon. Divorce is allowed. The dead, except infants, are burnt, and on the eleventh day after death worship is paid to a stone into which the ghost is supposed to have entered.

The Marāthī-speaking Kolīs of the Konkan and Deccan also have four endogamous divisions. Of these the Son-Kolīs are confined to the coast tract, and are fishermen and sailors. They are closely connected with the Agrīs, and have a *sar pātel* or chief headman who lives at Alībāg. The men affect a cap of red cloth scalloped over the forehead, and the married women wear glass bangles on the left arm only, those of the right arm being thrown into the sea at marriage to save the husband from the dangers of the deep. The Malhāri Kunam or Pānbhari Kolīs are found in large numbers in Thāna District, where they are husbandmen, and more sparsely in the Deccan, where they are boatmen, water-carriers, and ministers in the temples of Mahādeo. They eat with Kunbīs, from whom in the Konkan they can hardly be distinguished. The Rāj, Dongari, or Mahādeo Kolīs claim to have come about 1300 from the Nizām's country, where they are strong. The chief of Jawhār in Thāna belongs to this section, which is

more warlike than the others, and has often made itself notorious for turbulence and gang-robberies. Above the Ghāts their chief centre was formerly at Junnar. They are now as a rule husbandmen. The Dhor Kolīs are looked down upon by the other sections because they eat beef, and are altogether of a lower type. Each of the three higher sections is divided into a number of exogamous family stocks (*kūl*). They claim descent from the sage Vālmīki, author of the Rāmāyana. Infant marriage is practised chiefly by the Rāj Kolīs. All sections allow the remarriage of widows, but only at night, and with maimed rites. A widow must marry out of her first husband's *kūl*. Divorce is allowed only by Rāj Kolīs. All sections worship various forms of Siva, and in the Konkan also the local gods and ghosts known as Hirvā, Chitā, Vāghdeo, &c., with offerings of fowls, goats, and liquor. They believe firmly in witchcraft and omens. The marriage rites are conducted by Brāhmans. The dead, except in cases of cholera, are burnt, but the Rāj Kolīs sometimes bury, and employ *rāvals* in the funeral rites. Offerings are made to the dead from eleven to thirteen days after death, and yearly in the month of Bhādrapada.

In Central India the Kolīs are almost entirely confined to the Mālwā side. They live as a rule by agriculture and differ little from the ordinary Kunbī. The Census of 1901 shows the following distribution of the tribe throughout India:—

Bombay	1,714,921
Baroda	281,326
Hyderābād	230,598
Central India	32,268
Rājputāna	103,060
Other Provinces	57,301
Total	2,419,474

Kīrthar Range.—A mountain range forming the boundary between Sind and the Jhalāwān country in Baluchistān, between 26° 13′ and 28° 36′ N. and 67° 11′ and 67° 40′ E. From the point where the Mūla river debouches into the Kachhi plain, the range runs almost due south for a distance of 190 miles in a series of parallel ridges of bare rocky hills. At intervals similar ranges run athwart them. The offshoots tail off south-eastwards into Karāchi District, but a single line of low hills extends as far as Cape Monze. The greatest breadth is about 60 miles. The highest point is the Zardak peak (7,430 feet), and another fine peak is the Kuta-ka-kabar, or

Kuta-jo-kabar, i.e. 'the dog's tomb' (6,878 feet). The principal offshoot is the Lakhi range. The Kīrthar hills are pierced by the Kolāchi or Gāj river in a fine gorge, and the chief passes are known as the Harbāb, Phusi, Rohel, and Garre. These hills give their name to the Kīrthar geological group of Nummulitic limestone, which is found on their crests, overlaid by Tertiary rocks of Nāri and Gāj beds, the former being soft sandstone and the latter a hard dark-brown limestone exposed on the Gāj river. The tribes residing in the Kīrthar are the Marri and Jamāli Baloch, Jamot and Chuta Jats, and some Khidrāni and Sāssoli Brāhuis. They subsist chiefly by tending flocks, and by exporting the dwarf-palm (*Nannorhops Ritchieana*). Sind ibex and mountain sheep are fairly plentiful, and both black bears and leopards are occasionally met with.

Lakhi Hills (*Laki*).—An offshoot of the KĪRTHAR RANGE in the Kotri *tāluka* of Karāchi District, Sind, Bombay. The Lakhi is the most easterly of a number of hill ranges in the western part of Sind, extending between Baluchistān and the alluvial tract of the Indus, and also between the desert of Shikārpur and Karāchi. Length of range, about 50 miles; greatest elevation, 1,500 to 2,000 feet; situation (centre), 26° N. and 67° 50′ E., the latitude of the northern limit being 26° 20′ and of the southern 25° 12′. The hills are for the most part of recent formation, containing marine remains in great quantities. Huge fissures, apparently produced by earthquakes, traverse the range; and the frequent occurrence of hot springs and sulphurous exhalations is a sign of volcanic action. Some parts, again, appear to be of more ancient formation, as they yield lead, antimony, and copper. The whole tract is wild and dreary. Near the town of Sehwān the Lakhi range terminates abruptly on the Indus, in a nearly perpendicular face of rock 600 feet high, which presents an imposing appearance from the river.

Sātpurās (or Satpurās).—A range of hills in the centre of India. The name, which is modern, originally belonged only to the hills which divide the Narbadā and Tāpti valleys in Nimār (Central Provinces), and which were styled the *sātputra* or 'seven sons' of the Vindhyan mountains. Another derivation is from *sātpura* ('sevenfolds') referring to the numerous parallel ridges of the range. The term Sātpurās is now, however, customarily applied to the whole range which, commencing at Amarkantak in Rewah, Central India (22° 41′ N. and 81° 48′ E.), runs south of the Narbadā river nearly down

Geographical position.

to the western coast. The Sātpurās are sometimes, but incorrectly, included under the Vindhya range. Taking Amarkantak as the eastern boundary, the Sātpurās extend from east to west for about 600 miles, and in their greatest width, where they stretch down to Berār, exceed 100 miles from north to south. The shape of the range is almost triangular. From Amarkantak an outer ridge (Maikala) runs south-west for about 100 miles to the Sāletekri hills in Bālāghāt District (Central Provinces), thus forming as it were the head of the range which, shrinking as it proceeds westward from a broad table-land to two parallel ridges, ends, so far as the Central Provinces are concerned, at the famous hill fortress of Asīrgarh. Beyond this point the Rājpīpla hills, which separate the valley of the Narbadā from that of the Tāpti, complete the chain as far as the Western Ghāts. On the table-land comprised between the northern and southern faces of the range are situated the District of Mandlā, and part of Bālāghāt, Seonī, Chhindwāra, and Betūl.

Geological formation.

The superficial stratum covering the main Sātpurā range is trappean; but in parts of the Central Provinces crystalline rocks are uppermost, and over the Pachmarhī hills sandstone is also uncovered. In Mandlā the higher peaks are capped with laterite. On the north and south the approaches to the Sātpurās are marked as far west as Turanmāl by low lines of foot-hills. These are succeeded by the steep slopes leading up to the summit of the plateau, traversed in all directions by narrow deep ravines, hollowed out by the action of the streams and rivers, and covered throughout their extent with forest.

Features of the plateau.

Portions of the Sātpurā plateau consist, as in Mandlā and the north of Chhindwāra, of a rugged mass of hills hurled together by volcanic action. But the greater part is an undulating table-land, a succession of bare stony ridges and narrow fertile valleys, into which the soil has been deposited by drainage. In a few level tracts, as in the valleys of the Māchna and Sāmpna near Betūl, and the open plain between Seonī and Chhindwāra, there are extensive areas of productive land. Scattered over the plateau, isolated flat-topped hills rise abruptly from the plain. The scenery of the northern and southern hills, as observed from the roads which traverse them, is of remarkable beauty. The drainage of the Sātpurās is carried off on the north by the Narbadā, and on the south by the Waingangā, Wardhā, and Tāpti, all of which have their source in these hills.

The highest peaks are contained in the northern range, rising abruptly from the valley of the Narbadā, and generally sloping down to the plateau; but towards the west the southern range has the greater elevation. Another noticeable feature is a number of small table-lands lying among the hills at a greater height than the bulk of the plateau. Of these, Pachmarhī (3,530 feet) and Chikalda in Berār (3,664 feet) have been formed into hill stations; while Raigarh (2,200 feet) in Bālāghāt District and Khāmla in Betūl (3,800 feet) are famous grazing and breeding grounds for cattle. Dhūpgarh (4,454 feet) is the highest point on the range, and there are a few others of over 4,000 feet. Among the peaks that rise from 3,000 to 3,800 feet above sea-level, the grandest is TURANMĀL (Bombay Presidency), a long, rather narrow table-land 3,300 feet above the sea and about 16 square miles in area. West of this the mountainous land presents a wall-like appearance towards both the Narbadā on the north and the Tāpti on the south. On the eastern side, the Tāsdin Vali (Central India) commands a magnificent view of the surrounding country. The general height of the plateau is about 2,000 feet. **Height.**

The hills and slopes are clothed with forest extending over some thousands of square miles; but much of this is of little value, owing to unrestricted fellings prior to the adoption of a system of conservancy, and to the shifting cultivation practised by the aboriginal tribes, which led to patches being annually cleared and burnt down. The most valuable forests are those of *sāl* (*Shorea robusta*) on the eastern hills, and teak on the west. **Forests.**

The Sātpurā Hills have formed in the past a refuge for aboriginal or Dravidian tribes driven out of the plains by the advance of Hindu civilization. Here they retired, and occupied the stony and barren slopes which the new settlers, with the rich lowlands at their disposal, disdained to cultivate; and here they still rear their light rains crops of millets which are scarcely more than grass, barely tickling the soil with the plough, and eking out a scanty subsistence with the roots and fruits of the forests and the pursuit of game. The Baigās, the wildest of these tribes, have even now scarcely attained to the rudiments of cultivation; but the Gonds, the Korkūs, and the BHĪLS have made some progress by contact with their Hindu neighbours. **Hill tribes.**

The open plateau has for two or three centuries been peopled by Hindu immigrants; but it is only in the last fifty years that travelling has been rendered safe and easy, by the construction **Communications.**

of metalled roads winding up the steep passes and enabling wheeled traffic to pass over the heavy land of the valleys. Till then such trade as existed was conducted by nomad Banjārās on pack-bullocks. The first railway across the Sātpurā plateau, a narrow-gauge extension of the Bengal-Nāgpur line from Gondiā to Jubbulpore, has recently been opened. The Great Indian Peninsula Railway, from Bombay to Jubbulpore, runs through a breach in the range just east of Asīrgarh, while the Bombay-Agra road crosses farther to the west.

Ghāts, The (etymologically, 'a pass through a mountain,' or 'landing-stairs from a river'; in this case the 'passes' or 'landing-stairs' from the coast to the inner plateau).—Two ranges of mountains, forming the eastern and the western walls which support the triangular table-land of Southern India. The Eastern Ghāts run in fragmentary spurs and ranges down the east side of the Peninsula, receding inland and leaving broad tracts between their base and the coast. The Western Ghāts form the great sea-wall for the west side of the Peninsula, with only a narrow strip between them and the shore. At one point they rise in precipices and headlands out of the ocean, and truly look like colossal 'landing-stairs' from the sea. The Eastern and the Western Ghāts meet at an angle in the Nīlgiris, and so complete the three sides of the interior table-land. The inner plateau has an elevation seldom exceeding 2,000 to 3,000 feet. Its best-known hills are the Nīlgiris ('blue mountains'), which contain the summer capital of Madras, Ootacamund (7,000 feet). The highest point is Anaimudi peak in Travancore State (8,837 feet), while Dodabetta in the Nīlgiri District reaches 8,760 feet. This wide region of highlands sends its waters chiefly to the east coast. The drainage from the northern edge of the three-sided table-land enclosed by the Ghāts falls into the Ganges. The Narbadā runs along the southern base of the Vindhyas which form that edge, and carries their drainage due west into the Gulf of Cambay. The Tāpti flows almost parallel to the Narbadā, a little to the southward, and bears to the same gulf the waters from the SĀTPURĀ Hills. But from this point, proceeding southwards, the Western Ghāts rise into a high unbroken barrier between the Bombay coast and the rainfall of the inner table-land. The drainage has therefore to make its way right across India to the eastwards, now twisting round hill ranges, now rushing down the valleys between them, until the rain which the Bombay sea-breeze has dropped upon the Western Ghāts finally falls into the Bay of Bengal. In this way the

three great rivers of the Madras Presidency—the Godāvari, Kistna, and Cauvery—rise in the mountains overhanging the Bombay coast, and traverse the whole breadth of the central table-land before they reach the ocean on the eastern shores of India.

The entire geography of the two coasts of the Peninsula is determined by the characteristics of these two mountain ranges. On the east, the country is comparatively open, and everywhere accessible to the spread of civilization. It is here that all the great kingdoms of Southern India fixed their capitals. Along the west, only a narrow strip of lowland intervenes between the barrier range and the sea-board. The inhabitants are cut off from communication with the interior, and have been left to develop a civilization of their own. Again, the east coast is a comparatively dry region. Except in the deltas of the great rivers, the crops are dependent upon a local rainfall which rarely exceeds 40 inches in the year. The soil is poor, the general elevation high, and the mountains are not profusely covered with forest. In this region the chief aim of the Forest department is to preserve a sufficient supply of trees for fuel. On the west all these physical conditions are reversed. The rivers are mere hill-torrents, but the south-west monsoon brings an unfailing rainfall in such abundance as to clothe even the hill slopes of the southern portion with a most luxuriant vegetation. The annual fall all along the coast from Surat to Malabar averages 100 inches, which increases to 300 inches high up among the mountains. What the western coast loses in regular cultivation it gains in the natural wealth of its primaeval forests, which display the most magnificent scenery in all India and supply most valuable timber.

(For further information *see* GHĀTS, EASTERN, and GHĀTS, WESTERN.)

Ghāts, Western.—A range of mountains about 1,000 miles in length, forming the western boundary of the Deccan and the watershed between the rivers of Peninsular India. The Sanskrit name is Sahyādri. The range, which will be treated here with reference to its course through Bombay, Mysore and Coorg, and Madras, may be said to begin at the Kundaibāri pass in the south-western corner of the Khāndesh District of the Bombay Presidency, though the hills that run eastward from the pass to Chimtāna, and overlook the lower Tāpti valley, belong to the same system. From Kundaibāri (21° 6′ N. and 74° 11′ E.) the chain runs southward with an

In the Bombay Presidency.

average elevation which seldom exceeds 4,000 feet, in a line roughly parallel with the coast, from which its distance varies from 20 to 65 miles. For about 100 miles, up to a point near Trimbak, its direction is somewhat west of south; and it is flanked on the west by the thickly wooded and unhealthy table-land of Peint, Mokhāda, and Jawhār (1,500 feet), which forms a step and a barrier between the Konkan lowlands and the plateau of the Deccan (about 2,000 feet). South of Trimbak the scarp of the western face is more abrupt; and for 40 miles, as far as the Mālsej pass, the trend is south-by-east, changing to south-by-west from Mālsej to Khandāla and Vāgjai (60 miles), and again to south-by-east from here until the chain passes out of the Bombay Presidency into Mysore near Gersoppa (14° 10′ N. and 74° 50′ E.). On the eastern side the Ghāts throw out many spurs or lateral ranges that run from west to east, and divide from one another the valleys of the Godāvari, Bhīma, and Kistna river systems. The chief of these cross-ranges are—the SĀTMĀLAS, between the Tāpti and Godāvari valleys; the two ranges that break off from the main chain near Harischandragarh and run south-eastwards into the Nizām's Dominions, enclosing the triangular plateau on which Ahmadnagar stands, and which is the watershed between the Godāvari and the Bhīma; and the Mahādeo range, that runs eastward and southward from Kamālgarh and passes into the barren uplands of Atpādi and Jath, forming the watershed between the Bhīma and the Kistna systems. North of the latitude of Goa, the Bombay part of the range consists of eocene trap and basalt, often capped with laterite, while farther south are found such older rocks as gneiss and transitional sandstones. The flat-topped hills, often crowned with bare wall-like masses of basalt or laterite, are clothed on their lower slopes with jungles of teak and bamboo in the north; with *jāmbul* (*Eugenia Jambolana*), *ain* (*Terminalia tomentosa*), and *nāna* (*Lagerstroemia parviflora*) in the centre; and with teak, black-wood, and bamboo in the south.

On the main range and its spurs stand a hundred forts, many of which are famous in Marāthā history. From north to south the most notable points in the range are the Kundaibāri pass, a very ancient trade route between Broach and the Deccan; the twin forts of Sālher and Mulher guarding the Bābhulna pass; TRIMBAK at the source of the holy river Godāvari; the Thal pass by which the Bombay-Agra road and the northern branch of the Great Indian Peninsula Railway

ascend the Ghāts; the Pimpri pass, a very old trade route south between Nāsik and Kalyān or Sopāra, guarded by the twin forts of Alang and Kulang; Kalsūbai (5,427 feet), the highest peak in the range; Harischandragarh (4,691 feet); the Nāna pass, a very old route between Junnar and the Konkan; Shivner, the fort of Junnar; Bhīmashankar, at the source of the Bhīma; Chākan, an old Musalmān stronghold; the Bor or Khandāla pass, by which the Bombay-Poona road and the southern branch of the Great Indian Peninsula Railway enter the Deccan, and on or near which are the caves of Kondāne, Kārli, Bhāja, and Bedsa; the caves of Nādsur and Karsāmbla below the Vāgji pass; the forts of Sinhgarh and Purandhar in the spurs south of Poona; the forts of Raigarh in the Konkan and of Pratāpgarh between the new Fitzgerald *ghāt* road and the old Pār pass; the hill station of MAHĀBALESHWAR (4,717 feet) at the source of the Kistna; the fort and town of Sātāra; the Kumbhārli pass leading to the old towns of Pātan and Karād; the Ambā pass, through which runs the road from Ratnāgiri to Kolhāpur; the forts of Vishalgarh and Panhāla; the Phonda pass, through which runs the road from Deogarh to Nipāni; the Amboli and the Rām passes, through which run two made roads from Vengurla to Belgaum; Castle rock, below which passes the railway from Marmagao to Dhārwār; the Arbail pass on the road from Kārwār to Dhārwār; the Devīmane pass on the road from Kumta to Hubli; and the GERSOPPA FALLS on the Sharāvatī river.

On leaving the Bombay Presidency, the Western Ghāts bound the State of Mysore on the west, separating it from the Madras District of South Kanara, and run from Chandragutti (2,794 feet) in the north-west to Pushpagiri or the Subrahmanya hill (5,626 feet) in the north of Coorg, and continue through Coorg into Madras. In the west of the Sāgar *tāluk*, from Govardhangiri to Devakonda, they approach within 10 miles of the coast. From there they trend south-eastwards, culminating in Kudremukh (6,215 feet) in the south-west of Kadūr District, which marks the watershed between the Kistna and Cauvery systems. They then bend east and south to Coorg, receding to 45 miles from the sea. Here, too, numerous chains and groups of lofty hills branch off from the Ghāts eastwards, forming the complex series of mountain heights south of Nagar in the west of Kadūr District. Gneiss and hornblende schists are the prevailing rocks in this section, capped in many places by laterite, with some bosses of granite.

In Mysore and Coorg.

The summits of the hills are mostly bare, but the sides are clothed with magnificent evergreen forests. *Ghāt* roads to the coast have been made through the following passes: Gersoppa, Kollūr, Hosangadi, and Agumbi in Shimoga District; Būndh in Kadūr District; Manjarābād and Bisāle in Hassan District.

In the Madras Presidency.

In the Madras Presidency the Western Ghāts continue in the same general direction, running southwards at a distance of from 50 to 100 miles from the sea until they terminate at Cape Comorin, the southernmost extremity of India. Soon after emerging from Coorg they are joined by the range of the Eastern Ghāts, which sweeps down from the other side of the peninsula; and at the point of junction they rise up into the high plateau of the Nīlgiris, on which stand the hill stations of Ootacamund (7,000 feet), the summer capital of the Madras Government, Coonoor, Wellington, and Kotagiri, and whose loftiest peaks are Dodabetta (8,760 feet) and Makurti (over 8,000).

Immediately south of this plateau the range, which now runs between the Districts of Malabar and Coimbatore, is interrupted by the remarkable Pālghāt Gap, the only break in the whole of its length. This is about 16 miles wide, and is scarcely more than 1,000 feet above the level of the sea. The Madras Railway runs through it, and it thus forms the chief line of communication between the two sides of this part of the peninsula. South of this gap the Ghāts rise abruptly again to even more than their former height. At this point they are known by the local name of the Anaimalais, or 'elephant hills,' and the minor ranges they here throw off to the west and east are called respectively the Nelliampathis and the Palni Hills. On the latter is situated the sanitarium of Kodaikānal. Thereafter, as they run down to Cape Comorin between the Madras Presidency and the State of Travancore, they resume their former name.

North of the Nīlgiri plateau the eastern flank of the range merges somewhat gradually into the high plateau of Mysore, but its western slopes rise suddenly and boldly from the low coast. South of the Pālghāt Gap both the eastern and western slopes are steep and rugged. The range here consists throughout of gneisses of various kinds, flanked in Malabar by picturesque terraces of laterite which shelve gradually down towards the coast. In elevation it varies from 3,000 to 8,000 feet above the sea, and the Anaimudi Peak (8,837 feet) in Travancore is the highest point in the range and in

Southern India. The scenery here is always picturesque and frequently magnificent, the heavy evergreen forest with which the slopes are often covered adding greatly to their beauty. Large game of all sorts abounds, from elephants, bison, and tigers to the Nīlgiri ibex, which is found nowhere else in India.

Considerable areas on the Madras section of the range have been opened up by European capital in the last half-century for the cultivation of tea, coffee, cinchona, and cardamoms. Its forests are also of great commercial value, bamboos, blackwood (*Dalbergia latifolia*), and teak growing with special luxuriance. The heavy forest with which the range is clothed is the source of the most valuable of the rivers which traverse the drier country to the east, namely the Cauvery, Vaigai, and Tāmbraparni; and the waters of the Periyār, which until recently flowed uselessly down to the sea on the west, have now been turned back by a tunnel through the range and utilized for irrigation on its eastern side.

Before the days of roads and railways the Ghāts rendered communication between the west and east coasts of the Madras Presidency a matter of great difficulty; and the result has been that the people of the strip of land which lies between them and the sea differ widely in appearance, language, customs, and laws of inheritance from those in the eastern part of the Presidency. On the range itself, moreover, are found several primitive tribes, among whom may be mentioned the well-known Todas of the Nīlgiris, the Kurumbas of the same plateau, and the Kādars of the Anaimalais. Communications across this part of the range have, however, been greatly improved of late years. Besides the Madras Railway already referred to, the line from Tinnevelly to Quilon now links up the two opposite shores of the peninsula, and the range is also traversed by numerous *ghāt* roads. The most important of these latter are the Charmadi *ghāt* from Mangalore in South Kanara to Mudgiri in Mysore; the Sampājī *ghāt* between Mangalore and Mercāra, the capital of Coorg; the roads from Cannanore and Tellicherry, which lead to the Mysore plateau through the Perumbādi and Peria passes; and the two routes from Calicut to the Nīlgiri plateau up the Karkūr and Vayittiri-Gūdalūr *ghāts*.

Sātmāla.—Range of hills in Bombay, Berār, and Hyderābād State, which also bears the names of the AJANTA, Chāndor, and Indhyādri Hills, and Sahyādriparbat.

Hab.—River on the western frontier of Sind, Bombay, which

forms in the latter part of its course the boundary between British territory and Baluchistān. It rises opposite the Porāli river at the northern end of the Pab range, flows south-east for 25 miles, then due south for 50 miles, and finally south-west, till it falls into the Arabian Sea near Cape Monze, in 24° 54′ N. and 66° 42′ E., after a total length of about 240 miles. Except the Indus and the Gāj, it is the only permanent river in Sind. Its principal tributaries are the Sārūna, the Samotri, and the Wira Hab. As far as the Phusi pass the course is confined and narrow. Thereafter it gradually widens, and for some 50 miles from its mouth is bordered by fine pasture land. Water is always to be found in pools, but the river is not utilized for irrigation.

Indus (Sanskrit, *Sindhu*; Greek, *Sinthos*; Latin, *Sindus*).—The great river of North-Western India, which rises in Tibet, and then flows through Kashmīr, the North-West Frontier Province, and the Punjab, and after a final course through Sind falls into the Arabian Sea in 23° 58′ N. and 67° 30′ E. The drainage basin of the Indus is estimated at 372,700 square miles, and its total length at a little over 1,800 miles. The towns of importance on or near its banks in British territory are, beginning from the south: Karāchi, Kotri, Hyderābād, Sehwān, Sukkur, Rohri, Mithankot, Dera Ghāzi Khān, Dera Ismail Khān, Miānwāli, Kālābāgh, Khushālgarh, and Attock.

Course amid the Himālayas.

The first section of the course of the Indus lies outside British territory, and must be dealt with briefly here. The river rises, as above stated, in Tibet (32° N. and 81° E.) behind the great mountain wall of the Himālayas which forms the northern boundary of India, and is said to spring from the north side of the sacred Kailās mountain (22,000 feet), the Elysium of ancient Sanskrit literature. Issuing from the ring of lofty mountains about Lake Mānasarowar, whence also the Sutlej, the Brahmaputra, and the Kauriālā spring, it flows north-west for about 160 miles under the name of Singh-ka-bāb, until it receives the Ghar river on its south-western bank. A short distance below the junction of the Ghar, the Indus, which is supposed to have an elevation of 17,000 feet at its source, enters the south-eastern corner of Kashmīr at an elevation of 13,800 feet, flowing slowly over a long flat of alluvium. Following a steady north-by-west course it skirts Leh at a height of 10,500 feet and drops to 8,000 feet in Baltistān, just before it receives the waters of the Shyok river. At Leh it is joined by the Zāskār river, and is crossed by the

great trade route into Central Asia via the Karakoram Pass. Early travellers like Dr. Thomson and Mr. Blane have described this portion of the Indus. The former found numerous hot springs, some of them with a temperature of 174° and exhaling a sulphurous gas. Still flowing north, but more westerly, through Kashmīr territory, it passes near Skārdu in Baltistān, and reaches the Haramosh mountain (24,300 feet) in about 34° 50′ N. and 74° 30′ E. Here it takes a turn southwards at an acute angle, and passing beneath the Hattu Pīr, at an elevation of 4,000 feet, enters Kohistān in the Dīr, Swāt, and Chitrāl Agency near Gur. The steepness of its fall varies, now becoming greater, now less. This inequality of slope has been connected with the changes that occurred in the glacial period from the damming of the river by huge glaciers and the formation of great thicknesses of lacustrine deposit. The Indus has been the cause of serious and disastrous floods; the rapid stream dashes down gorges and wild mountain valleys, and in its lower and more level course it is swept by terrific blasts. Even in summer, when it is said to dwindle down to a fordable depth during the night, it may in the course of the day swell into an impassable torrent from the melting of the snows on the adjoining heights. Opposite Skārdu in Baltistān it is, even in the depth of winter, a grand stream, often more than 500 feet wide and 9 or 10 feet in depth. After leaving Gur, it flows for about 120 miles south-west through the wilds of Kohistān, until it enters the North-West Frontier Province (35° 25′ N. and 73° 51′ E.) near Darband, at the western base of the Mahāban mountain. The only point to which special allusion can be made in the long section of its course beyond British territory is the wonderful gorge by which the river bursts through the western ranges of the Himālayas. This gorge is near Skārdu, and is said to be 14,000 feet in sheer descent.

The Indus, on entering the Hazāra District of the North-West Frontier Province, 812 miles from its source, is about 100 yards wide in August, navigable by rafts, but of no great depth, and studded with sandbanks and islands. It is fordable in many places during the cold season; but floods or freshes are sudden, and Ranjīt Singh is said to have lost a force, variously stated at from 1,200 to 7,000 horsemen, in crossing the river. Even the large and solid ferry-boats which ply upon it are sometimes swept away. Almost opposite Attock it receives the Kābul River, which brings down the waters of Afghānistan. The two rivers have about an equal volume; At Attock.

both are very swift, and broken up with rocks. Their junction during floods is the scene of a wild confusion of waters. The Kābul river is navigable for about 40 miles above the confluence, but a rapid just above it renders the Indus impracticable. Attock, the limit of the upward navigation of the Indus, forms the first important point on the river within British territory. By this time it has flowed upwards of 860 miles, or nearly one-half of its total length, its further course to the sea being about 940 miles. It has fallen from an elevation of 17,000 feet at its source in Tibet to about 2,000 feet, the height of Attock being 2,079 feet. In the hot season, opposite the fort, its velocity is 13 miles an hour; and in the cold season, 5 to 7 miles. The rise of ordinary floods is from 5 to 7 feet in twenty-four hours, and the maximum is 50 feet above cold-season level. Its width varies greatly with the season, at one time being more than 250 yards, at another less than 100. The Indus is crossed at Attock by the railway bridge opened in 1883, by a bridge of boats, and by a ferry. The main trunk road to Peshāwar also crosses the river by a subway on the railway bridge.

In the Punjab.

After leaving Attock, the Indus flows almost due south, forming the western boundary of the Punjab, parallel to the Sulaimān Hills. The great north road from Bannu to Sind runs for several hundred miles along its western bank; and from Attock to Mahmūd Kot the Māri-Attock, Māri, and Sind-Sāgar sections of the North-Western Railway run along its eastern bank. Twelve miles below Attock the Indus receives the waters of the Haroh, a rapid stream which, rising in the Murree hills as the Dhānd, meets the Karrāl coming down from the Mochpuri peak, and rushes through steep banks for a total length of 90 miles. At Makhad, the Sohān brings in all the drainage of Rāwalpindi and Jhelum Districts that is not taken by the Jhelum river. The Indus forms the eastern border of the two frontier Districts of Dera Ismail Khān in the North-West Frontier Province and Dera Ghāzi Khān in the Punjab with the Sind-Sāgar Doāb on its eastern bank, and only a narrow strip of British territory between it and the hill tribes of the Sulaimān ranges on the west. Just above Mithankot, in the south of Dera Ghāzi Khān District, it receives the accumulated waters of the Punjab. Between the Indus and the Jumna flow the five great streams from which the Punjab (Panj-āb, literally 'The five waters') takes its name. These are the Jhelum, the Chenāb, the Rāvi, the Beās, and the Sutlej. After various junctions these unite to form the

Panjnad river, literally 'The five streams,' which marks for a short space the boundary between British territory and the Bahāwalpur State, and unites with the Indus near Mithankot, about 490 miles from the sea. In the cold season the breadth of the Indus above the confluence is about 600 yards, its velocity 5 miles an hour, its depth from 12 to 15 feet, and its estimated discharge 10,000 to 25,000 cubic feet per second. During flood-times the breadth sometimes increases to 5 miles, and the discharge to 1,000,000 cubic feet per second. The dimensions of the Panjnad above the point of junction are somewhat less than those of the Indus during the cold season, but during the monsoon floods they are almost as large. The whole course of the Indus through the Punjab is broken by islands and sandbanks; but beautiful scenery is afforded along its banks, which abound with the date, acacia, pomegranate, and other trees.

Mithankot has an elevation of only 258 feet above the level of the sea. From Mithankot the Indus forms the boundary between the Punjab and the Bahāwalpur State, until, near Kashmor, it enters Sind in 28° 26′ N. and 69° 47′ E. From Bukkur (in Sind) to the sea the river is known familiarly among the people of the province as the Daryā ('the river'). Pliny writes of *Indus incolis Sindus appellatus*. It first touches Sind in the Upper Sind Frontier District, separating it from the Bahāwalpur State and Sukkur District. Formerly in years of high inundation its floods reached Jacobābād, finding their way thence into the Manchhar Lake. To prevent this, the Kashmor embankment, which is the largest in Sind, was erected. Leaving Kashmor the river crosses Sukkur, divides Lārkāna and Karāchi from the Khairpur State and Hyderābād District, finally emptying itself by many mouths into the Arabian Sea near Karāchi after a south-western course of 450 miles through Sind. It ranges in width from 480 to 1,600 yards, the average during the low season being 680 yards. During the floods it is in places more than a mile wide. Its depth varies from 4 to 24 feet. The water, derived from the snows of the Himālayas, is of a dirty brown colour, and slightly charged with saline ingredients, carbonate of soda, and nitrate of potash. Its velocity in the freshes averages 8 miles per hour; at ordinary times, 4 miles. The discharge per second varies between a minimum of 19,000 and a maximum of 820,000 cubic feet. On an average the temperature of the water is 10° lower than that of the air. Near the station of Sukkur and again at Kotri the river is spanned by a fine rail-

In Sind.

way bridge. The Sukkur bridge was opened in 1889, and resembles the Forth Bridge in having a central girder with a span of 200 feet, supported at the ends of two cantilever arms, each 310 feet long. The Indus begins to rise in March, attains its maximum depth and width in August, and subsides in September. The maximum rise registered at Kotri, near Hyderābād, was 22 feet 7 inches in 1894. There are many other gauges on the river.

The delta. The delta of the Indus covers an area of about 3,000 square miles, and extends along the coast-line for 125 miles. It is almost a perfect level, and nearly destitute of timber, the tamarisk and mangrove alone supplying fuel. In these respects the delta is similar to that of the Nile, but dissimilar to that of the Ganges. The marshy portions contain good pasturage, and rice grows luxuriantly wherever cultivation is possible; but the soil generally is not fertile, being a mixture of sand and clay. In the Shāhbandar *tāluka* are immense deposits of salt. The climate of the delta is cool and bracing in the winter months, hot in the summer, and during the floods most unhealthy.

Shifting channels. The Indus formerly flowed down the middle of the Thal. Basira, a village in the centre of the Muzaffargarh Thal, was called Bet Basira; and at Shāhgarh, near the southern end of the Thal, a long lake still exists which once formed the Indus bed. In 1800 the river at the apex of the delta divided into two main streams, known as the Baghīār and Sītā; but by 1837 it had entirely deserted the former channel. The Khedewāri passage also, which before 1819 was the highway of water traffic to Shāhbandar, was in that year closed by an earthquake. In 1837 the Kakaiwāri, which had then increased from a shallow creek to a river with an average width at low water of 770 yards, was recognized as the highway; but before 1867 this also was completely blocked. In 1897 the river suddenly cut 3 miles inland, north of Rohri, destroying the cultivated fields and the Mando-Dahiro road. Tando Nijābat on the right bank and Mithani on the left have been swept away four times and rebuilt farther off. For the present the Hajāmro, which before 1845 was navigable only by the smallest boats, is the main estuary of the Indus. The shape of the Hajāmro is that of a funnel, with the mouth to the sea; on the east side of the entrance is a beacon 95 feet high, visible for 2 miles; and two well-manned pilot boats lie inside the bar to point out the difficulties of navigation.

The following facts illustrate further the shifting nature of the

Indus. In 1845 Ghorābāri, then the chief commercial town of the delta, was on the river bank; but in 1848 the river deserted its bed. The town of Keti was built on the new bank. The new bank was overflowed a few years later, and a second Keti had to be built farther off. At present one of the chief obstructions to navigation is a series of rocks between Tatta and Bhimān-jo-pura, which in 1846 were 8 miles inland. In 1863 a thousand acres of the Dhāreja forest were swept away. The rapidity and extent of the destructive action in constant progress in the delta may be estimated from the fact that travellers have counted by the reports as many as thirteen bank slips in a minute. In some places the elephant-grass (*Typha elephantina*) does good service by driving its roots very deeply (often 9 feet) into the soil, and thereby holding it together.

Floods. The entire course of the Indus in British territory, from Attock to the sea, lies within the zone of deficient rainfall, the annual average being nowhere higher than 10 inches. Cultivation, therefore, is absolutely dependent upon artificial irrigation, almost to as great an extent as in the typical example of Egypt. But the Indus is a less manageable river than the Nile. Its main channel is constantly shifting; at only three places—Sukkur, Jerruck, and Kotri—are the river banks permanent; and during the season of flood the melted snows of the Himālayas come down in an impetuous torrent which no embankment can restrain. From time immemorial this annual inundation, which is to Sind what the monsoons are to other parts of India, has been utilized as far as possible by an industrious peasantry, who lead the water over their fields by countless artificial channels. Many such channels, constructed in the days of native rule, extend 30 and even 40 miles from the river bank. Recently the systematic schemes of British engineers have added numerous perennial canals, such as the JĀMRAO, constructed on scientific principles. The first recorded inundation of the Indus took place in 1833; another occurred in 1841 on a much larger scale. This flood was said to have been caused by the bursting of a glacier which formed over an accumulation of water in the Nubra Tso, into which there was a regular and steady flow from the surrounding hills. Eventually, the glacier was burst asunder by the pressure, and the released floods poured down the Shyok valley, carrying everything before them. There was another great flood in August, 1858, when the river rose 90 feet in a few hours, and the greater part of the private property in Naushahra cantonment was destroyed. Lower down in its course

considerable damage has been caused in DERA GHĀZI KHĀN DISTRICT, where protective works were undertaken. Of recent years the Indus has been embanked from above Kashmor to the mouth of the Begāri Canal, a distance of more than 50 miles. The embankment has proved a great protection to the North-Western Railway, which here runs at right angles to the river.

Irrigation. A full account of irrigation in SIND will be found in the article on that province. It must suffice in this place to give a list of the principal works, following the Indus downwards from the Punjab. The country has recently been surveyed with a view to a canal being led from Kālābāgh down the Sind-Sāgar Doāb, but the difficulties in the way are at present considerable. The waters of the river are first utilized on a large scale in the Indus Inundation Canals, which water a narrow strip between the Indus and the Sulaimān mountains. The canals in this tract have an aggregate length of 690 miles, of which 108 have been constructed under British rule. In Muzaffargarh District the Muzaffargarh Canals take off from the Indus and Chenāb, and in the Native State of Bahāwalpur the Chenāb and Sutlej, as well as the Indus, contribute to render cultivation possible. In Sind the following are the chief canal systems: on the right or west bank, the Desert, Unar Wah, Begāri, Sukkur, Ghar, and Western Nāra; on the left or east, the Nāra Supply Channel, Mahi Wah, JĀMRAO, a branch of the Eastern Nāra, and the EASTERN NĀRA with many distributaries, the principal being the Mithrao and Pinjāri. Other important canals are the Fuleli with two mouths, the Nasrat, and the Dād. The total area irrigated by canals from the Indus in 1903-4 was: in the Punjab, 714 square miles; in Sind, 4,925 square miles.

Navigation. As a channel of navigation, the Indus has disappointed the expectations that were at one time formed. Before British arms had conquered Sind and the Punjab, it was hoped that the fabled wealth of Central Asia might be brought by this course down to the sea. But, even so far as local traffic is concerned, experience has proved in this case, as with most other Indian rivers, that the cheapness of water communication cannot compete with the superior speed and certainty of railways. Since the opening of the Indus Valley State Railway (now included in the North-Western system) in the autumn of 1878, navigation on the Indus, whether by steamer or by native boat, has greatly fallen off. The general character of the Indus trade may be inferred from the statistics of imports and exports into the

Punjab by 'rail and river,' which refer only to traffic borne in part or wholly on the Indus. The original 'Indus flotilla,' which was broken up in 1862, placed its first steamer on the river in 1835. In 1859 a company established another Indus flotilla in connexion with the Sind Railway, with which it was formally amalgamated in 1870, the joint head-quarters being removed to Lahore. The railway flotilla was abolished in 1882–3. These were not the only navigation experiments on the Indus. In 1856 the Oriental Inland Steam Company obtained a yearly subsidy of Rs. 50,000 from Government; but, as the river current proved too powerful for its steamers, the company stopped the traffic, and eventually collapsed.

For the conservancy of the lower part of the river, Act I of 1863 (Bombay) provides for the registration of vessels, and the levy of pilotage fees by an officer called the Conservator and Registrar of the Indus, the sum realized being expended on the improvement of navigation.[1] A special export board, known as the Indus Commission, was constituted in 1901.

The boats of the Indus are the *dundo* or *zaurak*, both cargo-boats, the *kauntal*, or ferry-boat, and the *dundi*, or fishing-boat. The cargo-boats are sometimes of 60 tons burden, and when laden draw 4 feet of water. The state barges or *jhamptis* of the Sind Mīrs were built of teak, four-masted, and sometimes required crews of thirty men.

Fish abound. At the mouths, the salt-water varieties Fish. include the *Clupea neowhii*, a species of herring largely consumed along the coast and in the delta. The chief of the fresh-water varieties are the *palla*, placed by Dr. Day under the *Clupeidae*, and nearly allied to, if not identical with, the *hilsa* of the Ganges; and the *dambhro*. The local consumption and also the export of dried *palla* are very large. Otters, turtles, porpoises, water-snakes, and crocodiles, of both the blunt-nosed and the sharp-nosed species, are numerous.

[*Notes on the Indus River* (Karāchi, 1901).]

Banās.—River of Western India, which rises in the Arāvalli Hills to the north-east of Mount Abu, flows south-westwards through the Pālanpur Agency past the flourishing town and cantonment of Deesa, and falls into the Rann of

[1] The Indus Conservancy department and fees levied for its upkeep were abolished in March, 1906.

lover, of whom she had tried to rid herself, but who would not be denied, found her thus engaged, and his attentions becoming unbearable, the girl threw herself into the pot. She was at once turned into water, and a clear stream flowed from the jar and, wandering down the hill-side, formed the Mahī or 'curd' river. A more probable derivation, however, is from the name of the lake whence it springs. This is often called the Mau or Mahu, as well as the Mendā. The Mahī is regarded by the Bhīls and the Kolīs as their mother, and the latter make pilgrimages to four places on its waters—Mingrad, Fāzilpur, Angarh, and Yaspur. The height of its banks and the fierceness of its floods; the deep ravines through which the traveller has to pass on his way to the river; and perhaps, above all, the bad name of the tribes who dwell about it, explain the proverb: 'When the Mahī is crossed, there is comfort.'

It is interesting to note that this river has given rise to the terms *mehwās*, a 'hill stronghold,' and *mehwāsī*, a 'turbulent or thieving person.' The word was Mahīvāsī, 'a dweller on the Mahī,' and in Mughal times was imported into Delhi by the army, and is used by Muhammadan writers as a general term to denote hill chiefs, and those living in mountain fastnesses. A celebrated temple dedicated to Mahādeo at Baneshar (Rājputāna) stands at the spot where the Som joins the Mahī, and an important and largely attended fair is held here yearly.

Tāpti.—One of the great rivers of Western India. The name is derived from *tāp*, 'heat,' and the Tāpti is said by the Brāhmans to have been created by the sun to protect himself from his own warmth. The Tāpti is believed to rise in the sacred tank of Multai (*multāpi*, 'the source of the Tāpti') on the Sātpurā plateau, but its real source is two miles distant (21° 48′ N. and 78° 15′ E.). It flows in a westerly direction through the Betūl District of the Central Provinces, at first traversing an open and partially cultivated plain, and then plunging into a rocky gorge of the Sātpurā Hills between the Kālibhīt range in Nimār (Central Provinces) and Chikalda in Berār. Its bed here is rocky, overhung by steep banks, and bordered by forests. At a distance of 120 miles from its source it enters the Nimār District of the Central Provinces, and for 30 miles more is still confined in a comparatively narrow valley. A few miles above Burhānpur the valley opens out, the Sātpurā Hills receding north and south, and opposite that town the river valley has become a fine rich basin of alluvial soil about 20 miles wide. In the centre of

this tract the Tāpti flows between the towns of Burhānpur and Zainābād, and then passes into the Khāndesh District of Bombay. In its upper valley are several basins of exceedingly rich soil; but they have long been covered by forest, and it is only lately that the process of clearing them for cultivation has been undertaken.

Shortly after entering Khāndesh the Tāpti receives on the left bank the Pūrna from the hills of Berār, and then flows for about 150 miles through a broad and fertile valley, bounded on the north by the Sātpurās and on the south by the Sātmālas. Farther on the hills close in, and the river descends through wild and wooded country for about 80 miles, after which it sweeps southwards to the sea through the alluvial plain of Surat District, becoming tidal for the last 30 miles of its course. The banks (30 to 60 feet) are too high for irrigation, while the bed is crossed at several places by ridges of rock, so that the river is navigable for only about 20 miles from the sea. The Tāpti runs so near the foot of the Sātpurās that its tributaries on the right bank are small; but on the left bank, after its junction with the Pūrna, it receives through the Girnā (150 miles long) the drainage of the hills of Bāglān, and through the Bori, the Pānjhra, and the Borai, that of the northern buttress of the Western Ghāts. The waters of the Girnā and the Pānjhra are dammed up in several places and used for irrigation. On the lower course of the Tāpti floods are not uncommon, and have at times done much damage to the city of Surat. The river is crossed at Bhusāwal by the Jubbulpore branch of the Great Indian Peninsula Railway, at Savalda by the Bombay-Agra road, and at Surat by the Bombay, Baroda, and Central India Railway. The Tāpti has a local reputation for sanctity, the chief *tīrthas* or holy places being Chāngdeo, at the confluence with the Pūrna, and Bodhān above Surat. The fort of Thālner and the city of Surat are the places of most historic note on its course, the total length of which is 436 miles. The port of Suvāli (Swally), famous in early European commerce with India, and the scene of a sea-fight between the English and the Portuguese, lay at the mouth of the river, but is now deserted, its approaches having silted up.

Narbadā River (*Narmadā*; the *Namados* of Ptolemy; *Namnadios* of the *Periplus*).—One of the most important rivers of India, which rises on the summit of the plateau of Amarkantak (22° 41′ N. and 81° 48′ E.), at the north-eastern apex of the Sātpurā range, in Rewah (Central India), and

enters the sea below Broach in the Bombay Presidency after a total course of 801 miles.

Course of the river.

The river issues from a small tank 3,000 feet above the sea, surrounded by a group of temples and guarded by an isolated colony of priests, and falls over a basaltic cliff in a descent of 80 feet. After a course of about 40 miles through the State of Rewah, it enters the Central Provinces and winds circuitously through the rugged hills of Mandlā, pursuing a westerly course until it flows under the walls of the ruined palace of Rāmnagar. From Rāmnagar to Mandlā town it forms, for some 15 miles, a deep reach of blue water, unbroken by rocks and clothed on either bank by forest. The river then turns north in a narrow loop towards Jubbulpore, close to which city, after a fall of 30 feet called the Dhuāndhāra or 'fall of mist,' it flows for two miles in a narrow channel which it has carved for itself through rocks of marble and basalt, its width here being only about 20 yards. Emerging from this channel, which is well-known as the 'Marble Rocks,' and flowing west, it enters the fertile basin of alluvial land forming the Narbadā Valley, which lies between the Vindhyan and Sātpurā Hills, extending for 200 miles from Jubbulpore to Handiā, with a width of about 20 miles to the south of the river. The Vindhyan Hills rise almost sheer from the northern bank along most of the valley, the bed of the river at this part of its course being the boundary between the Central Provinces and Central India (principally the States of Bhopāl and Indore). Here the Narbadā passes Hoshangābād and the old Muhammadan towns of Handiā and Nimāwar. The banks in this part of its valley are about 40 feet high, and the fall in its course between Jubbulpore and Hoshangābād is 340 feet. Below Handiā the hills again approach the river on both sides and are clothed with dense forests, favourite haunts of the Pindāris and other robbers of former days. At Mandhār, 25 miles below Handiā, there is a fall of 40 feet, and another of the same height occurs at Punāsa. The bed of the river in its whole length within the Central Provinces is one sheet of basalt, seldom exceeding 150 yards in absolute width, and, at intervals of every few miles, upheaved into ridges which cross it diagonally, and behind which deep pools are formed. Emerging from the hills beyond Māndhāta on the borders of the Central Provinces, the Narbadā now enters a second open alluvial basin, flowing through Central India (principally the State of Indore) for nearly 100 miles. The hills are here well away from the river, the

Sātpurās being 40 miles to the south and the Vindhyas about 16 miles to the north. In this part of its course the river passes the town of Maheshwar, the old capital of the Holkar family, where its northern bank is studded with temples, palaces, and bathing *ghāts*, many of them built by the famous Ahalyā Bai whose mausoleum is here. The last 170 miles of the river's course are in the Bombay Presidency, where it first separates the States of Baroda and Rājpīpla and then meanders through the fertile District of Broach. Below BROACH CITY it gradually widens into an estuary, whose shores are 17 miles apart as it joins the Gulf of Cambay.

Drainage area, tributaries, &c.

The drainage area of the Narbadā, estimated at about 36,000 square miles, is principally to the south, comprising the northern portion of the Sātpurā plateau and the valley Districts. The chief tributaries are the Banjār in Mandlā, the Sher and Shakkar in Narsinghpur, and the Tawā, Ganjāl, and Chhotā Tawā in Hoshangābād District. The only important tributary to the north is the Hiran, which flows in beneath the Vindhyan Hills, in Jubbulpore District. Most of these rivers have a short and precipitous course from the hills, and fill with extraordinary rapidity in the rains, producing similarly rapid floods in the Narbadā itself. Owing to this and to its rocky course, the Narbadā is useless for navigation except by country boats between August and February, save in the last part of its course, where it is navigable by vessels of 70 tons burden up to the city of Broach, 30 miles from its mouth. It is crossed by railway bridges below Jubbulpore, at Hoshangābād, and at Mortakka. The influence of the tides reaches to a point 55 miles from the sea. The height of the banks throughout the greater part of its course makes the river useless for irrigation.

Sacred character of the river.

The Narbadā, which is referred to as the Rewā (probably from the Sanskrit root *rev*, 'to hop,' owing to the leaping of the stream down its rocky bed) in the Mahābhārata and Rāmāyana, is said to have sprung from the body of Siva and is one of the most sacred rivers of India, local devotees placing it above the Ganges, on the ground that, whereas it is necessary to bathe in the Ganges for forgiveness of sins, this object is attained by mere contemplation of the Narbadā. 'As wood is cut by a saw (says a Hindu proverb), so at the sight of the holy Narbadā do a man's sins fall away.' Gangā herself, so local legend avers, must dip in the Narbadā once a year. She comes in the form of a coal-black cow, but returns home quite white, free from all sin. The Ganges, moreover, was (accord-

ing to the *Rewā Purāna*) to have lost its purifying virtues in the year 1895, though this fact has not yet impaired its reputation for sanctity. At numerous places on the course of the Narbadā, and especially at spots where it is joined by another river, are groups of temples, tended by Narmdeo Brāhmans, the special priests of the river, where annual gatherings of pilgrims take place. The most celebrated of these are Bherāghāt, Barmhān, and Onkār Māndhāta in the Central Provinces, and Barwānī in Central India, where the Narbadā is joined by the Kapilā. All of these are connected by legends with saints and heroes of Hindu mythology; and the description of the whole course of the Narbadā, and of all these places and their history, is contained in a sacred poem of 14,000 verses (the *Narmadā Khanda*), which, however, has been adjudged to be of somewhat recent origin. Every year 300 or more pilgrims start to perform the *pradakshina* of the Narbadā, that is, to walk from its mouth at Broach to its source at Amarkantak on one side, and back on the other, a performance of the highest religious efficacy. The most sacred spots on the lower course of the river are Suklatīrtha, where stands an old banyan-tree that bears the name of the saint Kabīr, and the site of Rājā Bali's horse-sacrifice near Broach.

Historical associations.

The Narbadā is commonly considered to form the boundary between Hindustān and the Deccan, the reckoning of the Hindu year differing on either side of it. The Marāthās spoke of it as 'the river,' and considered that when they had crossed it they were in a foreign country. During the Mutiny the Narbadā practically marked the southern limit of the insurrection. North of it the British temporarily lost control of the country, while to the south, in spite of isolated disturbances, their authority was maintained. Hence, when, in 1858, Tāntiā Topī executed his daring raid across the river, the utmost apprehension was excited, as it was feared that, on the appearance of the representative of the Peshwā, the recently annexed Nāgpur territories would rise in revolt. These fears, however, proved to be unfounded and the country remained tranquil.

Godāvari River.—A great river of Southern India, which runs across the Deccan from the Western to the Eastern Ghāts; for sanctity, picturesque scenery, and utility to man, surpassed only by the Ganges and the Indus; total length, about 900 miles; estimated area of drainage basin, 112,000 square miles. The source of the river is on the side of a hill behind the village of TRIMBAK, in Nāsik District, Bombay,

only about 50 miles from the shore of the Indian Ocean. At this spot is an artificial reservoir reached by a flight of 690 steps, into which the water trickles drop by drop from the lips of a carven image, shrouded by a canopy of stone. From first to last the general direction of the river is towards the south-east. It passes by Nāsik town, and then separates Ahmadnagar District from the State of Hyderābād, its total course in the Bombay Presidency being about 100 miles. Above Nāsik it flows along a narrow rocky bed, but farther east the banks are lower and more earthy. Fifteen miles below Nāsik it receives, on the right, the Dārna from the hills of Igatpuri, and 17 miles farther down, on the left, the Kādva from Dindori. At the latter confluence, at Nander, the stream is dammed for irrigation. Near Nevāsa it receives on the right bank the combined waters of the Pravara and Mulā, which rise in the hills of Akola, near Harischandragarh.

Course in Bombay Presidency.

After passing the old town of Paithan on its left bank, the Godāvari now runs for a length of about 176 miles right across the Hyderābād State, receiving on its left bank the Pūrna, which flows in near Kararkher in Parbhani District, and on the right the Mānjra near Kondalwādi in Nander, while near Dharmsāgar in the Chinnūr *tāluk* of Adilābād District it receives, again on the right, the Māner. Below Sironchā it is joined by the Prānhita, conveying the united waters of the Wardhā and Waingangā; and from this point it takes a marked south-easterly bend, and for about 100 miles divides Chānda District and the Bastar Feudatory State of the Central Provinces from the Karīmnagar and Warangal Districts of Hyderābād. Thirty miles below the confluence of the Prānhita, the Godāvari receives the Indrāvati river from Bastar State and lower down the Tāl. The bed of the Godāvari where it adjoins the Central Provinces is broad and sandy, from one to two miles in width, and broken by rocks at only two points, called the First and Second Barriers, each about 15 miles long. In 1854 it was proposed to remove these barriers, and a third one on the Prānhita, with the object of making a waterway from the cotton-growing Districts of Nāgpur and Wardhā to the sea; but in 1871, after very considerable sums had been expended, the project was finally abandoned as impracticable. One of the dams erected in connexion with this project still stands, with its locks and canal, at Dummagudem in the north of the Godāvari District of Madras. Although the Godāvari only skirts the Central Provinces, it is one of the most important rivers in their drain-

In Hyderābād and the Central Provinces.

age system, as it receives through the Wardhā and Wainganga the waters of a portion of the Sātpurā plateau and of the whole of the Nāgpur plain.

In Madras Presidency. Some distance below Sironchā the Godāvari leaves the Central Provinces behind, and for a while forms the boundary between the Godāvari District of the Madras Presidency and the Hyderābād State; and in this part of its course it is joined on the left bank by a considerable tributary, the Sabarī. Thence it flows to the sea through the centre of the old Godāvari District, which has recently been divided, mainly by the course of the river, into the two Districts of Godāvari and Kistna. At the beginning of its course along Madras territory, the river flows placidly through a flat and somewhat monotonous country, but shortly afterwards it begins to force its way through the Eastern Ghāts and a sudden change takes place. The banks become wild and mountainous, the stream contracts, and at length the whole body of the river pours through a narrow and very deep passage known as 'the Gorge,' on either side of which the picturesque wooded slopes of the hills rise almost sheer from the dark water. Once through the hills, the river again opens out and forms a series of broad reaches dotted with low alluvial islands (*lankas*), which are famous for the tobacco they produce. The current here is nowhere rapid. At Rājahmundry, where the river is crossed by the East Coast line of the Madras Railway on a bridge more than 1½ miles in length, it varies from 4 to 11 feet a second. In floods, however, the Godāvari brings down an enormous volume of water, and embankments on both of its banks are necessary to prevent it from inundating the surrounding country.

A few miles below Rājahmundry the river divides into two main streams, the Gautami Godāvari on the east and the Vasishta Godāvari on the west, which run down to the sea through a wide alluvial delta formed in the course of ages by the masses of silt which the river has here deposited. It is in this delta that the waters of the Godāvari are first utilized on any considerable scale for irrigation. At Dowlaishweram, above the bifurcation, a great 'anicut' or dam has been thrown across the stream, and from this the whole delta area has been irrigated.

The Godāvari is navigable for small boats throughout the Godāvari District. Vessels get round the anicut by means of the main canals, of which nearly 500 miles are also navigable, and which connect with the navigable canals of the Kistna

delta to the south. Above the anicut there are several steamboats belonging to Government; but, as already observed, the attempts to utilize the Upper Godāvari as an important waterway have proved a failure.

The coast of the Godāvari delta was the scene of some of the earliest settlements of Europeans in India, the Dutch, the English, and the French having all established factories there. The channels of the river which led to these have now greatly silted up. The little French settlement of Yanam still remains, but the others—Bandamūrlanka, Injaram, Madapollam, and Pālakollu—now retain none of their former importance.

Sacred character of the river.

The peculiar sacredness of the Godāvari is said to have been revealed by Rāma himself to the *rishi* Gautama. The river is sometimes called Godā, and the sacred character especially attaches to the Gautami mouth. According to popular legend, it proceeds from the same source as the Ganges, by an underground passage; and this identity is preserved in the familiar name of Vriddha-Gangā. But every part of its course is holy ground, and to bathe in its waters will wash away the blackest sin. The great bathing festival, called Pushkaram, celebrated in different years on the most sacred rivers of India, is held every twelfth year on the banks of the Godāvari at Rājahmundry. The spots most frequented by pilgrims are—the source at Trimbak; the town of Bhadrāchalam on the left bank, about 100 miles above Rājahmundry, where stands an ancient temple of Rāmachandra, surrounded by twenty-four smaller pagodas; Rājahmundry itself; and the village of Kotipalli, on the left bank of the eastern mouth.

Kistna River (Sanskrit, *Krishna*, 'the black').—A great river of Southern India, which, like the Godāvari and Cauvery, flows almost across the peninsula from west to east. In traditional sanctity it is surpassed by both these rivers, and in actual length by the Godāvari; but the area of its drainage, including its two great tributaries, the Bhīma and Tungabhadra, is the largest of the three. Its total length is about 800 miles, and the total area of its catchment basin about 97,000 square miles.

Course in Bombay Presidency.

The Kistna rises about 40 miles from the Arabian Sea (17° 59′ N. and 73° 38′ E.) in the Western Ghāts just north of the hill station of Mahābaleshwar, and flows southwards, skirting the eastern spurs of the hills, past Karād (Sātāra District), where it receives on the right bank the Koyna from the western side of the Mahābaleshwar hills, and Sāngli, where it receives the waters of the Vārna, also from the west, until it

reaches Kurundvād, when the Pānchgangā joins it, again on the right bank. The river then turns eastward and flows through Belgaum District, the States of the Southern Marāthā Agency, and Bijāpur, into the Nizām's Dominions, after a course of about 300 miles in the Bombay Presidency. In Bijāpur District it is joined on the right bank by the Ghatprabha and Malprabha from the Western Ghāts. Near the hills the channel is too rocky and the stream too swift for navigation, but its waters are largely used for irrigation in Sātāra District and in the more open country to the south-east. In Belgaum and Bijāpur its banks of black soil or laterite are 20 to 50 feet high, especially on the south side, and the stream forms many islands covered with *babūl* bushes.

In Hyderābād State. On entering the Nizām's Dominions (at Echampet in Raichūr District) the Kistna drops from the table-land of the Deccan proper down to the alluvial *doābs* of Shorāpur and Raichūr. The fall is as much as 408 feet in about 3 miles. In time of flood a mighty volume of water rushes with a great roar over a succession of broken ledges of granite, dashing up a lofty column of spray. The first of the *doābs* mentioned above is formed by the confluence of the Bhīma, which brings down the drainage of Ahmadnagar, Poona, and Sholāpur; the second by the confluence of the Tungabhadra, which drains the north of Mysore and the 'Ceded Districts' of Bellary and Kurnool. At the point of junction with the Tungabhadra in the eastern corner of Raichūr District, the Kistna again strikes upon British territory, and forms for a considerable distance the boundary between the eastern portion of Hyderābād and the Kurnool and Guntūr Districts of Madras. Its bed is here for many miles a deep, rocky channel, with a rapid fall, winding in a north-easterly direction through the spurs of the Nallamalai range and other smaller hills. At Wazīrābād in Nalgonda District it receives its last important tributary, the Mūsi, on whose banks stands the city of Hyderābād. The total course of the river within and along the State of Hyderābād is about 400 miles.

In Madras Presidency. On reaching the chain of the Eastern Ghāts, the river turns sharply south-eastwards and flows for about 100 miles between the Kistna and Guntūr Districts (formerly the Kistna District) of Madras direct to the sea, which it enters by two principal mouths. It is in this last part of its course that the Kistna is for the first time largely utilized for irrigation. From the point where it turns southwards the rate of fall of its channel drops rapidly from an average of $3\frac{1}{2}$ feet a mile to $1\frac{1}{2}$ feet, and eventu-

ally, as it nears the sea, to as little as 7 or 9 inches. The enormous mass of silt it carries—which has been estimated to be sufficient in flood-time to cover daily an area of 5 square miles to a depth of 1 foot—has consequently in the course of ages been deposited in the form of a wide alluvial delta, which runs far out into the sea and slopes gradually away from either bank of the river, with an average fall of 18 inches to the mile. At Bezwāda, at the head of this delta, the Kistna runs through a gap 1,300 yards in width in a low range of gneissic hills, and here a great masonry dam or anicut has been thrown across the river, turning its waters into a network of irrigation channels which spread throughout the entire delta. Immediately below the dam the river is also crossed by the East Coast line of the Madras Railway on a girder-bridge of twelve spans of 300 feet. The flood velocity of the Kistna at this point is about 6½ miles an hour, and the flood discharge has been estimated to reach the enormous figure of 761,000 cubic feet a second.

The Kistna is too rapid for navigation above the dam, but between Bezwāda and its mouth sea-going native craft ply upon it for about six months in the year. The main irrigation canals are also navigable, and connect Kistna District with its northern neighbour Godāvari, and, by means of the Buckingham Canal, with the country to the southwards and the city of Madras.

Bhīma (Sanskrit, 'The Terrible,' one of the names of Pārvati).—A river of Southern India. It rises at the well-known shrine of Bhīmāshankar (19° 4′ N. and 73° 32′ E.) in the Western Ghāts, and flows south-eastwards, with many windings, through or along the boundary of the Bombay Districts of Poona, Sholāpur, and Bijāpur, for about 340 miles, till it enters the Nizām's Dominions, where after a farther course of 176 miles it eventually falls into the KISTNA, about 16 miles north of Raichūr. The first 40 miles of its course lie in a narrow and rugged valley, but farther east the banks are low and alluvial, though broken here and there by dikes of rock. In the dry season the stream is narrow and sluggish. At Rānjangaon the Bhīma receives on the right the combined waters of the Mulā and Muthā from Poona, and about 15 miles farther, on the left bank, the Ghod river from the northern side of the Bhīmāshankar hills. Not far from Tembhurni it is joined on the right bank by the Nīra from Bhor State, and, after passing the holy city of Pandharpur, receives on the right bank the Mān from the Mahādeo hills, and on the left the Sīna, which rises near Ahmadnagar. There are important irrigation works

on the Muthā, Nīra, and Sīna. Near Wādi Junction (Hyderābād State) the Bhīma is joined on the left by the Kāgnā river.

Gersoppa Falls.—The Gersoppa Falls are situated in 14° 14′ N. and 74° 49′ E., on the Bombay-Mysore frontier, about 18 miles east of Gersoppa, and 35 miles east of Honāvar (North Kanara District), from which they can best be visited. They are locally known as the Jog Falls, from the neighbouring village of Jog. The waterfall is on the Sharāvatī river, which, with a breadth above the falls of about 230 feet, hurls itself over a cliff 830 feet high, in four separate cascades, known as the Rājā (or Horseshoe) Fall, the Roarer, the Rocket, and La Dame Blanche. The best time to see the falls is early in December, when the river is low enough to make it possible to cross to the left or Mysore bank. Between June and November, when the river is flooded, the banks are shrouded in clouds of mist. From Gersoppa village the road climbs about 10 miles through noble stretches of forest to the crest of the Gersoppa or Malemani pass, and from the crest passes 8 miles farther to the falls. Close underwood hides all trace of the river, till, at the bungalow near the falls, the plateau commands a glorious view. The rock of the river-bed and the cliff over which the river falls are gneiss associated with hypogene schists. The Gersoppa Falls eclipse every other in India and have few rivals in the world for height, volume, and beauty combined. The varying effects of light and shade at different times of the day are among their greatest beauties. In the afternoon, as the sun sinks to the west, a lovely rainbow spans the waters; at night, the moon at times throws across the spray a belt of faintly-tinted light. On a dark night, rockets, blazing torches, or bundles of burning straw cast over the cliff light the raging waters with a fitful and weird glare. The best sight of the chasm is gained by lying down and peering over a pinnacle of rock, which stands out from the edge of the cliff. The finest general view of the falls is from the Mysore bank. From the right bank of the river a rough bamboo bridge crosses the Rājā channel to the rocks beyond. The path then keeps well above the edge of the cliff, among large rocks, over small channels, and across seven or eight of the broader streams by rude bamboo and palm-stem bridges. On the left or Mysore bank a well-kept path leads through shady woods to a point called Watkins's Platform, which commands a view across the chasm to the deep cleft where the waters of the Rājā and the Roarer join and plunge into the pool below. Hence a farther path through the woods leads down a series of steep steps to the

open hill-side, which slopes to the bed of the river. The edge of the pool affords a fine general view of the falls, of the magnificent rugged chasm, and of the deep winding gorge through which, in the course of ages, the waters of the river have untiringly eaten their way.

Cutch, Rann of (Sanskrit, *Irina*).—A salt waste lying between 22° 55′ and 24° 43′ N. and 68° 45′ and 71° 46′ E., covering an area of about 9,000 square miles, and stretching along the north and east of the State of CUTCH, which it separates from Sind on the north and from Rādhanpur and Kāthiāwār on the east and south. It varies in width from 25 to 35 miles on the north to 2 miles on the east. It is believed to be the bed of an arm of the sea, raised by some natural convulsion above its original level, and cut off from the ocean. It was a navigable lake in Alexander's time (325 B.C.) and a shallow lagoon at the date of the *Periplus* (third century A.D.), and there are local traditions of seaports on its borders. Geologically, it is of recent formation. The northern or larger Rann—measuring from east to west about 160 miles, and from north to south about 80—has an estimated area of not less than 7,000 square miles. The eastern or smaller Rann (about 70 miles from east to west), which is connected with the larger Rann by a narrow channel, covers an area estimated at nearly 2,000 square miles. Between March and October, when the whole tract is frequently inundated, the passage across is a work of great labour, and sometimes of considerable danger. Some of this inundation is salt water, either driven by strong south winds up the Lakhpat river from the sea, or brought down by brackish streams; the rest is fresh, the drainage of the local rainfall. The flood-waters, as they dry, leave a hard, flat surface, covered with stone, shingle, and salt. As the summer wears on, and the heat increases, the ground, baked and blistered by the sun, shines over large tracts of salt with dazzling whiteness, the distance dimmed and distorted by an increasing mirage. On some raised plots of rocky land water is found, and only near water is there any vegetation. Except a stray bird, a herd of wild asses, antelope, or an occasional caravan, no sign of life breaks the desolate loneliness. Unseasonable rain, or a violent south-west wind at any period, renders the greater part of the Rann impassable. Owing to the effects of an earthquake in 1819 the Greater Rann is considerably higher in the centre than along the edges; while the centre, therefore, is dry, there are frequently water and mud at its sides. The Little Rann is at present undergoing

a marked change. Year by year the sea is spreading farther eastward; and, along the coast, places which a few years ago were inaccessible to boats are now open to water traffic. There is a considerable manufacture of salt at KHĀRĀGHODA, the salt produced here being styled Barāgara salt, a name derived from the character of the soil.

Cambay, Gulf of.—The name for the strip of sea which separates the peninsula of Kāthiāwār from the Northern Bombay coast. The gulf was in ancient times much frequented by Arab mariners. Surat lies at the eastern point of its mouth, the Portuguese settlement of Diu at the western mouth, and Cambay town at its northern extremity. The gulf receives two great rivers, the Tāpti and Narbadā, on its eastern side, the Mahī and Sābarmatī on the north, and several small rivers from Kāthiāwār on the west. Owing to the causes mentioned under CAMBAY TOWN the gulf is silting up, and is now resorted to only by small craft. The once famous harbours of Surat and Broach on its coast have ceased to be used by foreign commerce.

Manchhar.—Lake in the Sehwān *tāluka* of Lārkāna District, Sind, Bombay, lying between 26° 22′ and 26° 28′ N. and 67° 37′ and 67° 47′ E. It is formed by the expansion of the Western Nāra and the Aral streams, and is fed by hill-torrents. The first flows into it from the north, and the latter from the Indus westward at a distance of about 12 miles; but the supply from the Nāra is trifling in quantity when compared with that from the Aral. It is, however, this latter stream which affords a means of discharge for the redundant waters of the lake. During the period of inundation the Manchhar may be estimated at from 15 to 20 miles in length, with a breadth of about 10 miles; but when the water is low, this area is greatly contracted, and is then probably not more than 10 miles in length. The space left uncovered by the receding water is sown with grain, especially wheat, yielding magnificent crops.

Although shallow at the sides, the lake has a considerable depth of water in the middle; and so great is the quantity of fine fish that hundreds of men and boats are employed. The fish are taken chiefly by spearing, but also in nets. In the season when the lotus is in blossom the lake presents a very beautiful appearance, as its surface, farther than the eye can reach, is covered with an unbroken succession of flowers and leaves.

The fisheries of the lake, which are let out on contract, yielded an average annual revenue of Rs. 5,091 during the five

years ending 1905–6. The principal fish are: the *dambhro* (or *chelri*), a reddish-coloured fish often attaining an enormous size, and ranking, according to native taste, next to the *palla* in excellence; the *morāko*; the *gandan*, a long, sharp, and very bony fish, of a silver colour, in length from 3 to 5 feet; the *shakār*, the 'murrel' of the Deccan; the *jerkho* or fresh-water shark, the largest fish in Sind; *goj* and *lor*, or eels; the *khaggo*, or catfish; the *popri*, the *dālu*, the *theli*; *gangat*, or prawns; the *danur*, and the *singāri*.

Nal.—A large lake in the Bombay Presidency, about 37 miles south-west of Ahmadābād, lying between 22° 43′ and 22° 50′ N. and 71° 59′ and 72° 6′ E. It was at one time part of an arm of the sea which separated Kāthiāwār from the mainland, and it still covers an area of 49 square miles. Its water, at all times brackish, grows more saline as the dry season advances, till by the close of the hot season it has become nearly salt. The borders of the lake are fringed with reeds and other rank vegetation, affording cover to innumerable wild-fowl of every description. In the bed are many small islands, much used as grazing grounds for cattle during the hot season.

Nāra, Eastern.—An important water-channel in Sind, Bombay. It is commonly spoken of as a natural branch of the Indus, and, judging from the enormous size of its bed and the fact that it has no source, may possibly have been so formerly. The upper part of the Nāra river, as it existed before works were undertaken on it by the British Government, was merely a small channel in the sand-hills of the eastern desert of Sind, through which spill-water from the Indus, above Rohri, found its way to the alluvial plain of the Indus in Central and Lower Sind. As much as 90,000 cubic feet per second was roughly calculated to have spilled into it during the flood of 1851. Owing to the very uncertain supply thus received in the Nāra, a channel from the Indus at Rohri, 12 miles in length, known as the Nāra Supply Channel, was constructed by Government in 1858–9, on the recommendation of Lieutenant Fife. This channel was designed to carry an average discharge of 8,413 cubic feet per second during the inundation period, but at times twice this quantity has passed through it. The Nāra river itself has remained untouched from the tail of the supply channel to the Jāmrao Canal mouth, a length of 100 miles, and this length has been gradually canalized by the silty discharge passing down it.

From 1854 to 1858 most of the depressions on the left side of the Nāra between the Jāmrao mouth and the present head

of the Thar Canal were embanked, and in 1857 water, admitted as an experiment, flowed at least as far south as the embankments extended. Between 1860 and 1867 the Nāra bed from the Makhi Weir to the Thar Weir was cleared in lengths aggregating 40 miles and widths averaging 150 feet. From 1876 to 1886 this work was continued below the Thar Weir. In 1884 the first cut was made by Government through the Allah Band, a broad ridge of ground on the Rann of Cutch thrown up by an earthquake in 1819. The course of the Nāra is generally southwards, crossing the territory of the Mīr of Khairpur for a distance of 100 miles and then running through Thar and Pārkar District, having generally on its left bank the sand-hills of the desert, and discharging at its 250th mile into the Purān, an old channel of the Indus, which flows to the sea 80 miles farther south through the Rann of Cutch.

The principal canals in connexion with the Eastern Nāra and their lengths, including branches, are—the JĀMRAO, 588 miles; the Mithrao, 155 miles; the Thar, 72 miles; and the Hiral, 41 miles. The aggregate cost of these works (exclusive of the Jāmrao) up to the end of 1903–4 amounted to 65·27 lakhs; the receipts in the same year were 5·63 lakhs, and the total charges (exclusive of interest) 1·14 lakhs. The gross income was thus 8·62 per cent. on the capital expended, and the net receipts 6·82 per cent. The area irrigated was 429 square miles.

The Jāmrao, constructed in the years 1894 to 1902, serves the Districts of Thar and Pārkar and Hyderābād, and the others supply the former only. The Nāra Supply Channel, the Eastern Nāra, and the Mithrao are partly navigable for a total length of 425 miles.

Jāmrao Canal.—A large and important water-channel in the Hyderābād and the Thar and Pārkar Districts of Sind, Bombay. The canal takes off from the Nāra river in the north-west corner of the Sanghar *tāluka* and joins the Nāra again in the extreme south of the Jamesābād *tāluka*, the total length of the area irrigated being about 130 miles, with an average breadth of 10 miles. The natural features vary. The upper reaches of the canal pass through the sandy jungle-clad hills along the Nāra river, which give place to an alluvial plain, covered, where formerly liable to be flooded from the Nāra, with thick jungle of *kandi*, *babūl*, and wild caper bushes, and are succeeded by the wide open plains sparsely dotted with vegetation that are the characteristic feature of the country. The length of the Jāmrao Canal is 117 miles, or, including all its branches and

distributaries, 588 miles. This canal has one long branch, called the West Branch, 63 miles in length, and about 408 miles of minor channels.

The canal was opened on November 24, 1899, and water for irrigation on a large scale was admitted in the following June. The cost of the work was about 84·6 lakhs, and the gross revenue of 1903–4 amounted to 6⅔ lakhs, which gives a net revenue of 4·3 lakhs or 5·1 per cent. on capital outlay to the end of the year. The area irrigated in 1903–4 was 451 square miles. Large areas were available for colonization in the centre of the tract adjoining the canal to which water had never before penetrated, and over which no rights had been previously acquired. To these lands, colonists have recently been drawn from the Punjab, Cutch, Jodhpur, Jaisalmer, Kohistān, and the Desert. The area so far allotted to colonists, on the model of the Chenāb Colony in the Punjab, amounted in 1904 to 116 square miles.

Begāri Canal.—An important water-channel in the Upper Sind Frontier District, Sind, Bombay. It taps the Indus at its extreme south-eastern boundary, forming for about 50 miles of its course a well-defined line of demarcation between the Frontier District and Sukkur. In 1851 this canal was at its head only 50 feet wide, with a depth of 9 feet. It was enlarged in 1854, when the water was admitted into it from the Indus and reached Jacobābād, 50 miles distant, in sixteen hours. Subsequently, the tail of the canal was enlarged, and extended farther westward. Several improvements have been carried out during the last few years. The entire length of the main canal is 76 miles, and it serves the Districts of Upper Sind Frontier (202 square miles), Sukkur (46 square miles), Kalāt (43 square miles), and Lārkāna (300 acres). About five canals branch directly from it, the principal being the Nur Wah (19 miles) and Mirzā (10 miles). The canal is also connected with the branches of the Ghār Canal. The aggregate cost of these works up to the end of 1903–4 amounted to 17 lakhs; the receipts in the same year were about 4½ lakhs, and the total charges (exclusive of interest) over one lakh. The gross income was thus 26 per cent. on the capital expended, and the net receipts 18·3 per cent. The area irrigated was 495 square miles. The canal is navigable for about 60 miles.

Desert Canal (formerly known as the Maksūda Wah).—An important channel in Sind, Bombay, issuing from the Indus, which it taps close to the village of Kashmor. It runs 75 miles into the desert tract west of Kashmor, irrigating the lands of the

Upper Sind Frontier District and Baluchistān. About twenty-two canals branch off from the main system, the principal being the Murād (6 miles), the New Falls (25 miles), and the New Frontier Rajwan (23 miles). The aggregate cost of these works up to the end of 1903-4 amounted to about 26½ lakhs; the gross receipts in the same year were over 2 lakhs, and the total charges (exclusive of interest) about 1½ lakhs. The gross income was thus 8·27 per cent. on the capital expended, and the net receipts 3·25 per cent. The area irrigated was 345 square miles.

Fuleli Canal.—A canal in Sind, Bombay, and one of the largest in India. It used to be fed by a winding channel taking off from the Indus about 9 miles north of Hyderābād. In 1856 a new mouth at Jamshora, 4 miles from Hyderābād, was excavated by Government at a cost of Rs. 1,05,000, and has proved to be the most profitable work in Sind. For about 20 miles south of Hyderābād the Fuleli was really a river channel, which flowed back into the Indus; but it was cut off from the river, and extended southwards by Miān Nūr Muhammad Kalhora and the Mīrs, to irrigate their lands, and has now become a very large canal. In March, 1900, it was made perennial by the excavation of an escape, which connects it with an old river channel, called the Purān, and so carries the excess water to the sea. The result is that the flooding of immense areas at the tail has been stopped, and about 1,000 boats and 5 steam launches ply on it almost continuously throughout the year. The length of the main canal is 98 miles and of its branches 914 miles. The maximum discharge, which has been limited on account of breaches in its banks and consequent flooding of large tracts, is 10,000 cubic feet per second; but when another escape is made, it will be possible to admit as much as 12,000 cubic feet.

In 1903-4 the gross revenue was 7⅓ lakhs, representing a return of 21·8 per cent. on the capital outlay. If the *jāgīr* land on the canal, which pays only about one-fifth of the ordinary assessment, had paid the full amount, the return on the capital outlay would have been 31·7 per cent. The greatest area cultivated in one year on this canal was 650 square miles in 1900-1; but when more scientific means of distribution are provided, this area will be increased.

Muthā Canals.—Two canals on the right and left bank of the Muthā river, in Poona District, Bombay, with a total length of 88 miles, commanding 26 square miles in the Haveli *tāluka* and the Dhond *petha* of Poona District. The canals, which

were constructed between 1873 and 1878—the Right Bank Canal in 1873–4 and the Left Bank in 1877–8—are fed by LAKE FIFE. The capital outlay on the canals was originally 26½ lakhs; but the canals and the reservoir of Lake Fife have involved a total expenditure, up to 1904, of 71 lakhs. The maximum area hitherto irrigated has been 22 square miles. One of the main objects of the Muthā Canals is the supply of drinking-water to Poona and Kirkee. Water rates are charged according to the nature of the crops. The gross assessment on crops, and the revenue expenditure on the canals, have been, in thousands of rupees:—

	Assessment.	Expenditure.
1880–90 (average)	1,62	69
1890–1900 (average)	2,54	82
1903–4	2,92	1,00

The percentage of net profits on these works varies from 2½ to a little over 3 per cent.

Nīra Canal.—A canal on the left bank of the Nīra river, Poona District, Bombay, with a total length of 100 miles, commanding 177 square miles in the Purandhar, Bhīmthadi, and Indāpur *tālukas*. The canal, which was constructed in 1885–6, is fed by LAKE WHITING. The total capital outlay on the canal was 21 lakhs, and on the canal and reservoir 57 lakhs. The largest area irrigated so far has been 81 square miles. Water rates are charged according to the nature of the crops. The gross assessment on crops, and the revenue expenditure on the canal, have been, in thousands of rupees:—

	Assessment.	Expenditure.
1885–90 (average)	13	19
1890–1900 (average)	95	55
1903–4	2,34	64

The work yields a profit on capital of about 3 per cent.

Tānsa Lake.—An artificial lake in Thāna District, Bombay, lying between 19° 32′ and 19° 36′ N. and 73° 14′ and 73° 18′ E., 53 miles north-east of Bombay City. It has been constructed by throwing a dam across the Tānsa river at a point behind the Māhuli hills. It was completed in 1892, and has a catchment area of 52½ and a water area of 5½ square miles, with a storage capacity of about 18,000 million gallons. The dam is 118 feet high and 1½ miles long. The existing aqueduct has a carrying capacity of 42 million gallons a day. The works cost nearly a crore and a half.

Lake Fife (Kharakvāsla).—Reservoir in the Haveli *tāluka* of Poona District, Bombay, situated in 18° 25′ N. and 73° 47′ E., 12 miles south-west of Poona city, constructed in 1868 to feed

the MUTHĀ CANALS. The work cost 31 lakhs, and has a surface area at full supply level of 3,753 acres.

Lake Whiting.—Reservoir in the Bhor State, Bombay, situated in 18° 11′ N. and 73° 51′ E., constructed in 1881, to feed the NĪRA CANAL. The work cost 21 lakhs, and has a surface area of 3,584 acres. Its extension is under consideration.

Anhilvāda.—The kingdom of Anhilvāda in Gujarāt, within the present limits of the Bombay Presidency, was founded about A.D. 746–65 by a Chāvada Rājput, Vanarājā, son of the king of Panchāsar, a small Chāvada chiefship of the Gūjar empire. Vanarājā, after an adventurous childhood, rose to fame by deeds of arms, and founded a dynasty which endured for two centuries. The site of Anhilvāda is said by tradition to have been indicated by a hunted hare that turned on its pursuers, a myth that is told of the founding of several other places. It is also related that the city was named after a Bharwād shepherd, Anhila, who assisted Vanarājā in finding a site for it. The early history of the kingdom is somewhat obscure; but it seems certain that Vanarājā ruled till 780, and was succeeded by eight rulers of his line, the last of whom died in 961. In that year the Chāvada dynasty was replaced by the Solankis or Chālukyas, of whom the first, Mūlarājā (941–96), is the most famous. He extended his dominions into Kāthiāwār, Cutch, and South Gujarāt. The descendants of Mūlarājā likewise ruled at Anhilvāda for two centuries. They were Saivas in religion, and were specially attached to the temple of Somnāth at Somnāth Pātan. Mahmūd of Ghazni captured and sacked the temple in 1026, during the reign of Bhīma I. On the withdrawal of Mahmūd, Bhīma rebuilt the temple, and the kingdom continued in the hands of his direct successors until 1143. From that date a collateral branch of Mūlarājā's descendants ruled in Anhilvāda for a hundred years, claiming sovereignty over Kāthiāwār and Mālwā, and at one time (1160) invading the Konkan. On the extinction of the line of Mūlarājā in 1242 the Vāghelas of Dholka ruled in these territories, till ousted by the invasion of Alā-ud-dīn Khiljī in 1298.

Bāglān.—A tract of country north of the Sātmāla Hills in Nāsik District, Bombay, which is now represented by the BĀGLĀN and KALVĀN *tālukas*. Bāglān is a region of hills and streams, and has long been noted for the excellence of its garden cultivation.

In the earliest times of which record remains, the tract

appears to have been held by a family of Rāthors, claiming kinship with the Rāthors of Kanauj, and to have formed a prosperous principality by reason of the fact that through it ran the main line of traffic between the Deccan and Gujarāt. Up to the commencement of the seventeenth century the Rāthors of Bāglān, who adopted the honorific title of Baharjī, and coined their own money, wielded considerable power; but they were from time to time reduced to the position of tributaries by the Sultāns of Gujarāt or the overlords of the Northern Deccan. The first authentic notice of Bāglān is in 1298, when Rai Karan, the last king of Anhilvāda, after his defeat by Ulugh Khān, fled thither and maintained himself as an independent chieftain with the aid of Rāmdeo of Deogiri. It is probable that at this date the Rāthors of Bāglān were tributaries of the Yādavas of Deogiri. After the overthrow of Rāmdeo, the country became an apanage of the Musalmān rulers of Deogiri; but in 1347, during the disturbances which resulted in the Deccan becoming independent of Delhi, it passed out of the possession of the Bahmani kings. Thus in 1366 the Bāglān chief is mentioned as allying himself with the rebel Bairam Khān against Muhammad Shāh Bahmani I; while five years later, when Malik Rājā, the founder of the Fārūki dynasty, established himself in Khāndesh, the chief was forced to become a tributary of Delhi. During the fifteenth century Bāglān was subject to the Ahmadābād Sultāns, and in 1429 was laid waste by Ahmad Shāh Bahmani I; and save for a short period commencing in 1499, when the Bāglān chiefs were forced to recognize the overlordship of the Nizām Shāhi dynasty of Ahmadnagar, they remained vassals of Ahmadābād until Akbar's conquest of Gujarāt in 1573. The country is described in the *Ain-i-Akbarī* (1590) as a mountainous and populous region between Surat and Nandurbār, in which excellent fruit of various kinds was grown. The chief was a Rāthor in command of 8,000 cavalry and 5,000 infantry, and possessed seven fortresses, two of which, Mulher and Sālher, were posts of exceptional strength.

After his conquest of Khāndesh in 1599, Akbar attempted to take Bāglān; but after a seven years' siege he was forced to compound with the chief, Pratāp Shāh, giving him several villages in return for an undertaking to protect all merchants passing through his territory, to send presents to the emperor, and to leave one of his sons as a hostage at Burhānpur.

Bairam Shāh, who succeeded Pratāp Shāh, was attacked and reduced to the position of a vassal by Aurangzeb in 1637. A

description of the country at that date is given in Elliot's *History of India*, vol. vii. A temperate climate, abundance of water, and the cultivation of excellent fruit combined to render it famous. It measured 200 miles in length by 160 in breadth, and contained 30 petty subdivisions and about 1,000 villages. It was bounded on the north by Sultānpur and Nandurbār; on the east by Chandor; on the south by Trimbak and Nāsik; and on the west by Surat and the territory of the Portuguese. Tavernier (1640–66) speaks of Bāglān as containing a large variety of valuable trees, vast quantities of antelopes, hares, and partridges, and wild cows (probably bison) in its more mountainous parts. Sugar-cane was largely grown and supplied many sugar-mills and furnaces; and the country generally derived much profit from the continuous stream of traffic between Surat and Golconda, which passed along its well-protected highways.

Between 1670 and 1672 the Marāthās appeared and succeeded in taking Sālher fort, which, however, was eventually restored to the Muhammadans in 1684. Under the rule of the Nizām, who rose to independent power in the Deccan in 1724, a commandant was appointed to Mulher and a governor to Bāglān; and this system seems to have been followed till 1795, when Bāglān was ceded by the Nizām to the Peshwā, who placed it, together with Khāndesh, in charge of a *Sarsūbahdār*. The fort of Sālher is supposed to have been granted by the Peshwā to Rānī Gahinābai, wife of Govind Rao Gaikwār, who, after the battle of Dhodap (1768), remained for some time at Poona as a state prisoner and afterwards ruled at Baroda from 1793 to 1800. On the overthrow of the Peshwā, Mulher fort was surrendered to the English on July 3, 1818, and the territory of Bāglān was incorporated in Khāndesh District. In 1869 Bāglān was transferred to Nāsik District; and in 1875 it was, with its petty subdivisions of Jaikhedan and Abhona, formed into two *tālukas*—Bāglān and Kalvān.

The true Carnatic.

Carnatic (*Kannada*, *Karnāta*, *Karnātaka-desa*).—Properly, as the name implies, 'the Kanarese country.' The name has, however, been erroneously applied by modern European writers to the Tamil country of Madras, including the Telugu District of Nellore. The boundaries of the true Carnatic, or Karnātaka-desa, are given by Wilks as

'Commencing near the town of Bīdar, 18° 45′ N., about 60 miles north-west from Hyderābād (Deccan). Following the course of the Kanarese language to the south-east, it is found

to be limited by a waving line which nearly touches Adoni, winds to the west of Gooty, skirts the town of Anantapur, and passing through Nandidroog, touches the range of the Eastern Ghāts; thence pursuing their southern course to the mountainous pass of Gazzalhati, it continues to follow the abrupt turn caused by the great chasm of the western hills between the towns of Coimbatore, Pollāchi, and Pālghāt; and, sweeping to the north-west, skirts the edges of the precipitous Western Ghāts, nearly as far north as the sources of the Kistna; whence following first an eastern and afterwards a north-eastern course, it terminates in rather an acute angle near Bidar, already described as its northern limit.'

This country has been ruled wholly or in part by many dynasties, of whom the Andhras or Sātavāhanas, the Kadambas, the Pallavas, the Gangas, the Chālukyas, the Rāshtrakūtas, the Cholas, the later Chālukyas, the Hoysalas, and the house of Vijayanagar are the most prominent. The Vijayanagar kings, who came into power about the year 1336, conquered the whole of the peninsula south of the Tungabhadra river. They were completely overthrown by the Muhammadans in 1565, and retired first to Penukonda, and then to Chandragiri, one branch of the family remaining at Anagundi opposite to their old capital. It was these conquests that probably led to the extension of the term 'Carnatic' to the southern plain country; and this latter region came to be called Karnāta Pāyānghāt, or 'lowlands,' to distinguish it from Karnāta Bālāghāt, or the 'hill country.' When the Muhammadan kings of the Deccan ousted the Vijayanagar dynasty, they divided the north of the Vijayanagar country between them into Carnatic Hyderābād (or Golconda) and Carnatic Bijāpur, each being further subdivided into Pāyānghāt and Bālāghāt. At this time, according to Wilks, the northern boundary of Karnāta (Carnatic) was the Tungabhadra.

Speaking of this period and the modern misapplication of the name, Bishop Caldwell says (*Grammar of the Dravidian Languages*, pp. 34–5):— The later or Madras Carnatic.

'The term *Karnāta* or *Karnātaka* is said to have been a generic term, including both the Telugu and Kanarese peoples and their languages, though it is admitted that it usually denoted the latter alone, and though it is to the latter that the abbreviated form Kannadam has been appropriated. Karnātaka (that which belongs to Karnāta) is regarded as a Sanskrit word by native Pandits; but I agree with Dr. Gundert in preferring to derive it from the Dravidian words *kar*, "black," *nāḍu* (the adjective form of which in Telugu is *nāti*), "country," that is, "the black country," a

term very suitable to designate the "black cotton soil," as it is called, of the plateau of the Southern Deccan. The use of the term is of considerable antiquity, as we find it in the *Varāha-Mihira* at the beginning of the fifth[1] century A.D. Tārānātha also mentions Karnāta. The word Karnāta or Karnātaka, though at first a generic term, became in process of time the appellation of the Kanarese people and of their language alone, to the entire exclusion of the Telugu. Karnātaka has now got into the hands of foreigners, who have given it a new and entirely erroneous application. When the Muhammadans arrived in Southern India, they found that part of it with which they first became acquainted—the country above the Ghāts, including Mysore and part of Telingāna—called the Karnātaka country. In course of time, by a misapplication of terms, they applied the same name Karnātak, or Carnatic, to designate the country below the Ghāts, as well as that which was above. The English have carried the misapplication a step farther, and restricted the name to the country below the Ghāts, which never had any right to it whatever. Hence the Mysore country, which is probably the true Carnatic, is no longer called by that name; and what is now geographically termed "the Carnatic" is exclusively the country below the Ghāts on the Coromandel coast.'

The Bombay Carnatic.

It is this latter country which formed the dominions of the Nawābs of the Carnatic, who played such an important part in the struggle for supremacy between the English and the French in the eighteenth century, and which now forms the greater portion of the present Madras Presidency. This connotation still survives in the designation of Madras regiments as Carnatic Infantry. Administratively, however, the term Carnatic (or Karnātak as it is there used) is now restricted to the Bombay portion of the original Karnāta: namely, the Districts of Belgaum, Dhārwār, and Bijāpur, and part of North Kanara, with the Native States of the Southern Marāthā Agency and Kolhāpur. *See* SOUTHERN MARĀTHĀ COUNTRY.

Extent.

Deccan (or *Dakhin*).—This name, a corruption of the Sanskrit *dakshina*='southern,' includes, in its widest sense, the whole of India south of the Narbadā river, or, which is nearly the same thing, south of the Vindhya mountains. In its narrower sense it has much the same meaning as MAHĀRĀSHTRA, or the country where the Marāthī language is spoken, if the below-Ghāt tract be omitted. In this connotation its southern boundary lies along the course of the Kistna river. In a still narrower sense the Deccan is regarded as

[1] *Recte* 'sixth.'

bounded on the north by the Sātmāla hills. Adopting the broadest meaning, the Deccan on its western side descends seaward by a succession of terraces from the WESTERN GHĀTS, which rise in parts to over 4,000 feet in height and terminate abruptly near Cape Comorin, the extreme southern point of the peninsula, at an elevation of 2,000 feet. From here, following the coast-line, the Eastern Ghāts commence in a series of detached groups, which, uniting in about latitude 11° 40′ N., run north-eastward along the Coromandel coast, with an average elevation of 1,500 feet, and join the Vindhyas, which cross the peninsula from west to east, in nearly the same latitude (13° 20′ N.) as their western counterpart. The Vindhyan range thus joins the northern extremities of the two Ghāts and completes the peninsular triangle of the Deccan. The eastern side of the enclosed table-land being much lower than the western, all the principal rivers of the Deccan—the Godāvari, Kistna, and Cauvery—rising in the Western Ghāts, flow eastward, and escape by openings in the Eastern Ghāts into the Bay of Bengal. Between the Ghāts and the sea on either side the land differs in being, on the east, composed in part of alluvial deposits brought down from the mountains, and sloping gently; while on the west the incline is abrupt, and the coast strip is broken by irregular spurs from the Ghāts, which at places descend into the sea in steep cliffs.

Geology.[1]

The Deccan table-land is one of the relics of the old Gondwāna continent which formerly connected India with Africa, and which broke up at about the time that the chalk was forming in Europe. It is one of the few solid blocks of ancient land which have not suffered any of the folding movements so marked in most lands, and which, so far as we know, have never been depressed below the ocean. Except near the present coasts at low levels, not a single marine fossil has been found in the whole Deccan. The 'basement complex' of the Deccan table-land includes the usual assemblage of gneisses and schists, among them the band of schists distinguished by the name of the Dhārwārs, containing the auriferous veins of Mysore which have, since they were opened up in 1881, yielded gold to the value of 19 millions sterling. Lying on the denuded surfaces of these ancient schists and gneisses are enormous thicknesses of unfossiliferous strata which, in default of evidence to the contrary, are regarded as pre-Cambrian in age. These occur as isolated patches in the Cuddapah and

[1] Contributed by Mr. T. H. Holland, Director, Geological Survey of India.

Kurnool Districts of Madras; in the Southern Marāthā Country; in parts of the Godāvari valley; and in Gwalior, Bundelkhand, and the Vindhyan region of Central India. In small basins, generally preserved at lower levels, we find the coal-bearing deposits formed by the great rivers of the old Gondwāna continent in upper palaeozoic and mesozoic times, while for an area of some 200,000 square miles the older rocks are covered with great masses of basaltic lava, which spread over the country in Upper Cretaceous times and now form the highlands of the Deccan, remaining practically as horizontal as they must have been when they flowed as molten sheets over the land. Here and there, where the Deccan trap has been cut through by weather influences, we get glimpses of the old land-surface which was overwhelmed by lava-flows, while between the flows there were apparently interruptions sufficient to permit of the development of life in the lakes and rivers, of which the records are preserved in the so-called inter-trappean beds of fresh-water limestone, shales, and sandstones. The scenery of the Deccan trap highlands is the result of the subaerial erosion of the horizontal sheets of lava; the flat plateaux of the hill-tops, and the horizontal terraces which are traceable for miles along the scarps, are features eminently characteristic of the weathering of basaltic lava-flows. The long grass, the general absence of large trees, and the occurrence of almost purely deciduous species, combine with the outlines of the hills to distinguish the trap areas from all others in the Deccan.

Two peculiar features of the Deccan are worth special mention: one is the occurrence, over most of the trap area, of the peculiar black, argillaceous, and calcareous soil known as *regar*, and, from its suitability for cotton-growing, as 'cotton soil'; the other is the peculiar decomposition product known as laterite, which is essentially a dirty mixture of aluminic and ferric hydrates, formed by a special form of rock alteration confined to moist tropical climates, and often resembling the material known as bauxite which is worked as a source of aluminium.

History. Little is known in detail of the history of the Deccan before the close of the thirteenth century. Hindu legends tell of its invasion by Rāma, and the main authentic points known are the coming of the first Aryans (*c.* seventh century B.C.), the advance of the Mauryas (250 B.C.), and the Scythic invasion of A.D. 100. Archaeological remains and inscriptions bear witness to a series of dynasties, of which the Cholas, the Andhras or

Sātavāhanas, the Chālukyas, the Rāshtrakūtas, and the Yādavas of Deogiri are the best known. (*See* BOMBAY PRESIDENCY, History.) The country was known to the author of the *Periplus* in the third century A.D. as Dachina Bades (Dakshināpata), and to the Chinese pilgrim Fa Hian in the fifth century as Ta Thsin. Continuous history commences with the Muhammadan invasion of 1294–1300, when Alā-ud-dīn, the Khiljī emperor of Delhi, overran Mahārāshtra, Telingāna, and Karnāta. In 1338 the reduction of the Deccan was completed by Muhammad bin Tughlak; but a few years later a general revolt resulted in the establishment of the Muhammadan Bahmani dynasty, and the retrogression of Delhi supremacy beyond the Narbadā. The Bahmani dynasty advanced its eastern frontier at the expense of the Hindu kingdom of Telingāna to Golconda in 1373, to Warangal in 1421, and to the Bay of Bengal in 1472. A few years later (1482) it began to disintegrate, and was broken up into the five rival Muhammadan kingdoms of BIJĀPUR, AHMADNAGAR, GOLCONDA, BĪDAR, and BERĀR. These were counterbalanced in the south, as the Bahmani empire had been, by the great Hindu kingdom of VIJAYANAGAR, which was however destroyed in 1565, at the battle of Tālikotā, by a coalition of the Muhammadan powers. Of these, Bīdar and Berār became extinct before 1630; the other three kingdoms were restored to the Delhi empire by the victories of Akbar, Shāh Jahān, and Aurangzeb. The Deccan was thus for a second time brought under the Delhi rule, but not for long. The Marāthās in 1706 obtained the right of levying tribute over Southern India, and their leading chiefs, who had practically superseded the dynasty of Sivajī, were the Peshwās of Poona. A great Delhi viceroy (the Nizām-ul-mulk), rallying all the Muhammadans of the South round him, established the Nizāmat of HYDERĀBĀD. The remainder of the imperial possessions in the Deccan was divided among minor princes, who generally acknowledged the supremacy of the Peshwā or the Nizām, according as they were north or south of the Tungabhadra. Mysore, alternately tributary to both, became eventually the prize of Haidar Alī, while in the extreme south the Travancore State enjoyed, by its isolated position, uninterrupted independence. Such was the position of affairs early in the eighteenth century. Meanwhile Portugal, Holland, France, and England had effected settlements on the coast; but the two former on so small a scale that they took, no important part in the wars of succession between the native princes which occupied the

middle of the century. The French and English, however, espoused opposite sides, and their struggles eventually resulted in establishing the supremacy of the latter (1761), which became definitely affirmed, under Lords Wellesley and Hastings, by the establishment of British influence at Hyderābād, the overthrow of Tipū Sultān, and the Marāthā Wars which followed, and the annexation of the Peshwā's dominions in 1818. The dominions of the other important Marāthā chief of the Deccan, the Bhonsla Rājā of Nāgpur, lapsed to the British on the extinction of the dynasty in 1854. The Deccan is to-day included in the Presidency of Madras, part of Bombay and the Central Provinces, together with Hyderābād, Mysore, and other Native States.

Extent. **Gujarāt.**—This name, taken in its widest sense, signifies the whole country in which Gujarātī is spoken, including Cutch and Kāthiāwār, as well as the northern Districts and States of the Bombay Presidency from Pālanpur to Damān: that is, the country lying between 20° 9′ and 24° 43′ N. and 68° 25′ and 72° 22′ E. In a narrower and more correct sense, the name applies to the central plain north of the Narbadā and east of the Rann of Cutch and Kāthiāwār. Gujarāt, in this sense, lies between 23° 25′ and 24° 4′ N. and 71° 1′ and 74° 1′ E., and has an area of 29,071 square miles and a population (1901) of 4,798,504. Of this area less than one-fourth (7,168 square miles), chiefly in the centre and south, is British territory, belonging to the four Districts of AHMADĀBĀD, KAIRA, PĀNCH MAHĀLS, and BROACH. About 4,902 square miles, chiefly in two blocks—one lying west of the Sābarmatī and the other between the Mahī and the Narbadā—belong to BARODA. The remainder belongs to the large and small States that have relations with the Bombay Government, and is distributed among the Agencies of PĀLANPUR in the north, MAHĪ KĀNTHA in the north-east, REWĀ KĀNTHA in the east, and CAMBAY at the mouth of the Sābarmatī.

The plain of Gujarāt is bounded on the north by the desert of Mārwār, and on the east by the hills of crystalline rock that run south-east from Abu to join the western outliers of the Vindhyas near Pāvāgarh. From these hills, in the neighbourhood of which the country is rough, rocky, and well wooded, it slopes in a south-westerly direction towards the Rann of Cutch, the Nal Lake, and the sea, unbroken by any stony outcrop or rising ground. The central region is of recent alluvial formation and has one of the richest soils in India, though parts of it are liable to flooding in the rains, and it suffered

much in the famine of 1899–1902. Towards the Rann, the Nal Lake, and the sea-coast, the plain passes into salt or sandy waste, where the subsoil water is brackish and lies deep below the surface. The grazing lands of Pālanpur in the north are watered by the Banās and Saraswatī, which flow from the Arāvalli mountains into the Little Rann. The Sābarmatī, rising near the source of the Banās, flows into the Gulf of Cambay. Farther east, the Mahī, rising far away in Mālwā, flows into the same gulf, which finally receives also the waters of the Narbadā, the lower course of which passes between Central Baroda and Rājpīpla and through the British District of Broach. The central and coast tracts are stoneless, and have fine groves of field trees, while the eastern hills are covered with forest. The spread of cultivation has driven the tiger, leopard, and bear into the eastern hills, and greatly reduced the numbers of wild hog; but antelope and *nīlgai* are still common. Game-birds, both on land and water, abound.

The name Gujarāt is derived from the widespread Gūjar tribe, which is not, however, at the present day of much account in the province. According to some writers, the Gūjars were immigrants from Central Asia. There is no certain trace of them in India before the sixth century, by the end of which they were powerful in Rājputāna and had set up a kingdom at Broach, so they most likely entered India with the White Huns in the latter half of the fifth century. The Chinese traveller Hiuen Tsiang (A.D. 640) was acquainted with the kingdom of Broach, and also with a Gurjara kingdom farther north which he calls Kiu-chi-lo, having its capital at Pilo-mo-lo, which is plausibly identified with Bhilmāl in the Jodhpur State. In its earliest form (Gurjararātra), the name Gujarāt is applied in inscriptions of the ninth century to the country north of Ajmer and the Sāmbhar Lake, while from the tenth to the thirteenth century Gujarāt means the Solanki kingdom of Anhilvāda. In the Musalmān period the name was applied to the province that was governed first from Anhilvāda and then from Ahmadābād. Name.

For the history of Gujarāt in the pre-Muhammadan period and its invasion by Mahmūd of Ghazni, *see* BOMBAY PRESIDENCY and ANHILVĀDA. By about 1233 the Solanki kingdom of Anhilvāda had broken up, and the most powerful rulers in Gujarāt were the Vāghela chiefs of DHOLKA. History.

'An inaccessible position, beyond the great desert and the hills connecting the Vindhyas with the Arāvalli range, long

preserved Gujarāt from the Muhammadan yoke. Only by sea was it easily approached, and to the sea it owed its peculiar advantages, . . . its favouring climate and fertile soil. . . . The greater part of the Indian trade with Persia, Arabia, and the Red Sea passed through its harbours, besides a busy coasting trade. "The benefit of this trade overflowed upon the country, which became a garden, and enriched the treasury of the prince. The noble mosques, colleges, palaces, and tombs, the remains of which still adorn Ahmadābād and its other cities to this day, while they excite the admiration of the traveller, prove both the wealth and the taste of the founders[1]." Not till the reign of Alā-ud-dīn (of Delhi) at the close of the thirteenth century did it become a Muslim province, and a century later it became independent again under a dynasty of Muslim kings. . . . Fīroz Shāh in 1391 granted the fief of Gujarāt to Zafar Khān, the son of a converted Rājput, and five years later the fief-holder assumed the royal canopy. He soon enlarged his dominions, at first but a strip between hills and sea, by the annexation of Idar to the north and Diu in Kāthiāwār, plundered Jhālor, and even took possession of Mālwā for a short space in 1407, setting his brother on the throne in the place of Hoshang, the son of Dilāwar. His successor Ahmad I (1411–43) founded Ahmadābād, which has ever since been the chief city of Gujarāt, and recovered Bombay and Salsette from the Deccan kings. Mahmūd I (1458–1511) not only carried on the traditional wars of his dynasty with Mālwā on the east and Khāndesh on the south, but kept a large fleet to subdue the pirates of the islands.

'Nor were Asiatic pirates the only disturbers of his coast. The first of the three great waves of European invasion was already beating on the shores of Gujarāt. Vasco da Gama had reached the Malabar ports in 1498, and the effects of the new influence were soon felt farther north. The Portuguese had no more intention, at first, of founding an eastern empire than the later Dutch and English companies. The hostility of the Muslim traders compelled them to protect their agents, and a commercial policy was necessarily supported by military power. . . . The collision was brought about by the spirited action of the last Mamlūk Sultān of Egypt, Kānsūh-el-Ghūri, who, realizing the imminent jeopardy of the great Indian trade which supplied so much of the wealth of Egypt, resolved to drive the Portuguese from the Arabian Sea. The Mamlūks had long maintained a fleet in the Red Sea, and Admiral Husain was dispatched in 1508 to Gujarāt with a well-equipped war squadron manned with sailors who had often fought with Christian fleets in the Mediterranean. He was joined by the fleet of Gujarāt, commanded by the governor of Diu, in spite of the efforts of the Portuguese captain, Lourenço de Almeida, to prevent their union; and the combined fleet was in every

[1] Erskine, *History of India*, vol. i, p. 21.

respect superior to the flotilla of Christian merchantmen which boldly sailed out of the port of Chaul to the attack. The Portuguese were defeated in a running fight which lasted two days, and the young captain, son of the famous viceroy, was killed. . . . He was avenged a few months later, when on February 2, 1509, his father, the viceroy Francisco de Almeida, utterly defeated the combined fleet of Egypt and Gujarāt off Diu. In the following year the king of Gujarāt offered Albuquerque, the conqueror of Goa, the port of Diu, and a Portuguese factory was there established in 1513, though the celebrated fortress of the Christian invaders was not built till 1535.

'Though unable to withstand the Portuguese—or perhaps not unwilling to see his powerful deputy at Diu humiliated—Bahādur (1526–37) was one of the most brilliant figures among the warrior kings of Gujarāt. The Rājputs of the hills and the kings of the Deccan owned his superiority, and in 1531 he annexed Mālwā. A Rājput rising and the advance of the Mughals under Humāyūn the son of Bābar for a time destroyed his authority (1535), but he recovered it bravely (1536), only to fall at last, drowned in a scuffle with the Portuguese whom he had admitted to his coast [1].'

In 1572 Akbar annexed Gujarāt to the Mughal empire, of which it became a *Sūbah*. At its best period the independent Muhammadan kingdom of Gujarāt comprised Northern Gujarāt from Abu to the Narbadā; Kāthiāwār, which became a Musalmān province through the occupation of Diu (1402) and Girnār (1471), and the sack of Dwārka Bet (1473); the Tāpti valley as far east as Thālner; and the tract between the Ghāts and the sea from Surat to Bombay.

The Mughal viceroys of Gujarāt were, up to the death of Aurangzeb (1707), on the whole successful in maintaining order and prosperity, in spite of the turbulence of the Kolīs and Rājputs in the north, of famines in 1596, 1631, 1681, 1684, and 1697–8, and of the Deccani attacks on Surat, which was sacked once by Malik Ambar (1609) and twice by Sivajī (1664 and 1670). Throughout the Mughal period the province generally yielded a revenue of nearly 2 crores, and a large foreign trade was carried on at the ports of Cambay, Broach, and Surat. The decline of Mughal rule began with a Marāthā raid across the Narbadā in 1705. From 1711 these invasions became annual, and the Marāthās established themselves successively at Songarh (1719), Chāmpāner (1723), and Baroda (1734). The beginning of the end came during the governorship of Sarbuland Khān (1723–30), who farmed

[1] S. Lane-Poole, *Mediaeval India* ('Story of the Nations'), chap. vii.

out the revenues and admitted the Marāthā claims to *chauth* and *sardeshmukhi*. Henceforward, although the Delhi court continued to appoint viceroys until 1748, absolute anarchy reigned in the province, which was ravaged impartially by the hostile leaders of the Peshwā's and the Gaikwār's armies, by the Rājās of Jodhpur, by the agents of the Nizām-ul-mulk, and by local Moslem chiefs, such as the Bābis, who established themselves at Junāgarh (1738) and Bālāsinor (1761), the Jhāloris, who settled at Pālanpur (1715), and Momin Khān, who began to scheme for the independence of Cambay about 1736. Famines in 1719, 1732, and 1747 added to the misery of the people. In 1737 the Gaikwār was admitted to a full half-share in the revenues of the province and occupied Ahmadābād jointly with the viceroy's troops (1738). Broach from 1731 to 1752 was held by a deputy of the Nizām, but had to give up a share of its customs to the Gaikwār. Surat suffered chiefly from the violence of rival candidates for the governorship.

Gujarāt was now parcelled out among a number of local chiefs who carried on ceaseless petty wars, which the Marāthās had no wish to suppress so long as they could secure their share of the plunder of the province. The Peshwā's seizure of half the Gaikwār's share in 1751 only added another claimant of blackmail. After the battle of Pānīpat the Musalmāns tried but failed to drive out the Gaikwār (1761), and the last chance of a strong native government growing up was ruined by the disputed succession at Baroda in 1768. The local troubles at Surat lasted until the castle was taken by the British in 1759.

The Marāthā confederacy now began to break up, and the Gaikwār was detached by his acceptance of British protection (1782). In Gujarāt there was little improvement in the government during this period, though, in spite of disputes in the Gaikwār's family and intrigues at the Poona court, a semblance of order was preserved by British influence from 1782 to 1799, when the Gaikwār took Ahmadābād and imprisoned the Peshwā's agent. Further disturbances then took place, which were put down by a British force (1803). In 1799 the Peshwā had farmed his rights to the Gaikwār, who was already in subsidiary alliance with the British. Negotiations followed betwen the British, the Peshwā, and the Gaikwār, which ended in the cession to the first named of certain districts and rights in Gujarāt. The British Government had annexed Surat in 1800 on the death of the Nawāb, whose family were pensioned

off, and had conquered Broach from Sindhia in the war of 1803.

After the overthrow of the Peshwā in 1818 territorial arrangements in Gujarāt settled down into their present form, the country being divided between the British Districts of AHMADĀBĀD, BROACH, KAIRA, PĀNCH MAHĀLS, and SURAT, the State of Baroda, and a number of small Native States. Gujarāt suffered very severely from famine in 1899–1902, a period which was marked by great mortality both of men and cattle. The blow fell more severely from the fact that it came after a long period of prosperity, so that the people and the officials were alike unprepared for the calamities that followed.

[See Sir E. C. Bayley, *Gujarāt* (1886) in the "The History of India as told by its own Historians"; Sir J. Campbell, *History of Gujarāt*, vol. i, part i (1896), *Bombay Gazetteer* series; and Rev. G. P. Taylor, 'The Coins of Ahmadābād,' *Journal, Royal Asiatic Society, Bombay Branch*, vol. xx.]

Kohistān.—The local name of a barren and hilly tract of country in Karāchi District, Sind, Bombay, composed of outlying spurs from the KĪRTHAR RANGE. The southern portion merges into extensive plains, separated by low lines of hills, which afford abundant grazing for herds of cattle after rain. The Kohistān is entirely dependent on rainfall, and cultivation is possible only where the rainfall has been impounded, or along one of the numerous watercourses. Some of these streams, known as *nais*, are of considerable size, the chief being the Bāran, which flows into the Indus below Kotri.

The Kohistān is a *mahāl* or petty subdivision, with a population (1901) of 12,877. The revenue is Rs. 3,900. The population is nomadic and fluctuating, consisting chiefly of Sindīs and Baloch, formerly given to internal feuds, but now content to earn a frugal living by grazing herds of camels, cattle, sheep, and goats.

Konkan.—A name now applied to the tract of country Extent.
below the Western Ghāts south of the Damangangā river, including Bombay, the Districts of Thāna, Kolāba, Ratnāgiri, the coast strip of North Kānara, the Native States of Janjīra, Sāvantvādi, and the Portuguese territory of Goa, with an area of 3,907 square miles; population (1901), 5,610,432. The term 'Konkan' seems to be of Dravidian origin, but has not so far been satisfactorily explained. The language of the Konkan was probably, at a remote period, Kanarese, but is now mainly Marāthī. Mention is made of the people of the Konkan in the Mahābhārata, Harivamsa, and Vishnu Purāna,

as well as in the work of Varāha Mihira, the geographer of the sixth century, and in the Chālukya inscriptions of the seventh century. The tract is found referred to under the name of Aparānta in the third century B.C. and the second century A.D. Late Sanskrit works apply the name Konkan to the whole western coast of India from about Trimbak to Cape Comorin, and mention seven divisions, the names of which are variously given, but Konkan proper is always one of these and appears to have included the country about Chiplūn. The Konkan does not seem at any time to have been a political unit. The Arab geographers of the ninth to the fourteenth century were familiar with it in its present signification. In history it appears either as a number of petty states or as part of a larger whole as in the early days of Marāthā power, when the *Konkan Ghāt Mātha*, or 'spurs of the Ghāts,' were linked with such territory in the Deccan as from time to time came into the possession of Sivajī and his successors.

Physical aspects.

The coast strip of the Konkan is a fertile and generally level tract, watered by hill streams and at parts intersected by tidal backwaters, but has nowhere any great rivers. A luxuriant vegetation of palms rises along the coast, the coco-nut plantations being an important source of wealth to the villagers. In the southern portions the Ghāts forming the eastern boundary are covered with splendid forest. The crops are abundant; and owing to the monsoon rainfall being precipitated upon the Ghāts behind, the Konkan is exempt from drought or famine. The common language is a dialect of Marāthī known as Konkanī, in which a Dravidian element is thought to be traceable.

History.

The history of the Konkan can best be gathered from a perusal of the historical portions of the articles on the included States and Districts. The earliest dynasty which can be connected with this tract is that of the Mauryas, three centuries before Christ; but the only evidence of the connexion rests on an Asoka inscription discovered at the town of Sopāra in Thāna District. The principal dynasties that succeeded were the following, in their order, so far as order is ascertainable: the Andhras or Sātavāhanas, with their capital at Paithan in the Deccan; the Mauryas, of Purī; the Chālukyas; the Rāshtrakūtas; the Silāhāras, whose capital was perhaps the island of Elephanta in Bombay harbour; the Yādavas, with their capital at Deogiri, the modern Daulatābād; the Muhammadans (Khiljīs, Bahmanis, Bijāpur and Ahmadābād kings, and Mughals); Portuguese (over a limited area); Marāthās; and British. The Konkan coast was known to the Greeks and

Romans, and Ptolemy (A.D. 150) and the author of the *Periplus* (247) afford evidence that Greek traders from Egypt dealt with the Konkan ports.

The arrival of the Bani-Israil and the Pārsīs from the Persian Gulf are important incidents in Konkan history. The Bani-Israil, in whom some trace the descendants of the lost tribes, are now scattered over the Bombay Presidency, but mostly in the North Konkan. The descendants of the first Pārsīs, who landed in Thāna about the seventh century, now crowd the streets and markets of Bombay, engross a large part of the city's wealth and principal trading operations, and have their agents in all important provincial towns.

The Portuguese reached Malabar in 1498. In 1510 Goa was seized, and soon afterwards Chaul and Bassein became the head-quarters of their naval dominion. During the sixteenth century the Portuguese shared the rule of the Konkan with the Muhammadan kings of Ahmadnagar and Bijāpur. The rise and fall of the pirate power of the Angrias, who from 1700 to 1756 harassed English, Dutch, and native shipping alike, mark a disastrous period of Konkan history. In the seventeenth and early part of the eighteenth century the Konkan had an unenviable notoriety on account of these pirates, who were known as the 'Malabars,' and infested the numerous creeks and harbours. The strongholds of these marauders are still to be seen on the coast. Their chief ports were Revadanda, Suvarndrug, and Gheria or Vijayadrug.

Since the British administration was established in 1818 on the overthrow of the Peshwā, the peace of the whole area, if some disturbances in Sāvantvādi in 1844 and 1850 be excepted, has remained unbroken.

Mahārāshtra.—The name given to the country in which the Marāthī language is spoken, and more especially to the Deccan in its most restricted sense. The origin of the word is still a subject of speculation. Molesworth in his Dictionary of the Marāthī language gives currency to the derivation from *Mahār* and *rāshtra*, i.e. the country of the Mahārs, an early and now socially degraded tribe found throughout the Deccan; but a better opinion seems to be that it is derived from Mahārāthā, i.e. the great Rātha or Ratta, the Rattas having been once the ruling race in the Southern Marāthā Country. A branch of this tribe, the Rāshtrakūtas, ruled in the Deccan between the sixth and tenth centuries A.D. In support of this derivation, there is an inscription of the second century in which the terms 'Mahārāthā' and 'Mahābhoja' are used,

which suggests that Mahā is an honorific affix. In the third century before Christ, Asoka is reported to have sent Buddhist missionaries to the country. In the time of the early Chālukyas, the Chinese pilgrim Hiuen Tsiang (A.D. 640) refers to their kingdom as Mo-ho-lo-cha, i.e. Ma-ha-ra-tha.

The country between Gujarāt and the Carnatic, in which Marāthī is spoken, includes the line of the Western Ghāts for many hundred miles, and the country lying below and above this barrier. On the west it is a country of gorge and mountain, the trap formation of the hills offering a natural line of fortifications, of which the Marāthās in their early struggles for power were not slow to avail themselves. Inland from the crest of the Ghāts the country for some distance resembles the spurs and valleys lying below, and both were formerly classed together as the Konkan Ghāt Mātha, or 'spurs of the Ghāts.' Farther east the rocky promontories become less marked until they sink into isolated hills, the country assuming the aspect of a vast and almost treeless plain, intersected by numerous rivers, but for the most part scantily watered and infertile.

Mahārāshtra is the country of the Marāthās, who form 30 per cent. of its population. Once a large tribe, the Marāthās have divided into numerous occupational castes, such as the Marāthā Brāhman, the Marāthā Kumhār, Shimpi, Dhobi, &c., who do not usually describe themselves as Marāthās in their own country. The term is now reserved for the descendants of the old fighting stock, a hardy and vigorous class once the terror of India, now merged very largely in the cultivating class known as Kunbīs. A Marāthā and a Marāthā Kunbī differ only in social precedence. Thus the leading Marāthā families wear the sacred thread, do not allow widow marriage, and claim the rites and position of Kshattriyas, while the Marāthā Kunbīs allow widow marriage, and neither wear the thread nor claim to be 'twice-born.' As a body, the Marāthās are divided into numerous clans, whose surnames betray Aryan, Rājput, and Dravidian elements, the last being the strongest. There are traces of an original totemistic organization still to be detected among them. Three million persons in the Konkan and Deccan returned themselves as Marāthās in the Census of 1901, forming the backbone of the population of the Bombay Presidency. Fond of their traditions of deeds of valour embodied in the ballads of the country-side, the Marāthā peasantry are now a frugal and peace-loving people, content to extort a bare subsistence from the

stony Deccan uplands or the rocky spurs of the Ghāts. At holiday seasons they make pilgrimages to numerous shrines of saints and heroes scattered over the country, and expend small sums in harmless merrymaking when the business of the pilgrimage has been disposed of. It is possible that the Marāthās may be connected with the Reddis of the Telugu country.

For the salient facts of Marāthā history *see* BOMBAY PRESIDENCY.

Southern Marāthā Country (or Bombay Carnatic).—This is the portion of the old Karnāta, the Kanarese country, included in the Bombay Presidency (*see* CARNATIC), and comprises the Districts of Belgaum, Bijāpur, Dhārwār, and North Kanara above the Western Ghāts, with the Native States of Kolhāpur and the Southern Marāthā Agency, making up a total area of 5,074 square miles, with a population (1901) of 370,265 persons. For the first six centuries of the Christian era the country seems to have been ruled by a number of petty dynasties, of whom the Kadambas and Gangas are the best known. The early Chālukyas, the Rāshtrakūtas, and the Western Chālukyas next held sway, and were displaced by the Hoysalas who disputed the overlordship with the Yādavas of Deogiri. From the eleventh to the thirteenth century all real power was in the hands of local chiefs, among whom the Kadambas of Goa and Hangal and the Rattas of Saundatti occupied a leading place. Under the Vijayanagar empire (*c.* 1336–1565) these petty chiefships maintained themselves with more or less formal acknowledgement of the central power. Late in the sixteenth century the Bijāpur kings began to conquer the country; but their progress was interrupted by conflict with the Portuguese and the nascent power of the Marāthās, who soon ousted the Bijāpur governors from these dominions and whose name has prevailed in the descriptive title of the country.

Where it adjoins the Deccan plains, the Bombay Southern Marāthā Country is, like them, a treeless, flat tract, scantily watered and interspersed with rocky hill ranges. Farther south the western portion is covered with forest, which is dense on the line of the Western Ghāts, but opens out to permit of cultivation where the country becomes more level. Farther east again is a well-watered and fertile plain, supplied with numerous irrigation reservoirs, beneath which are valuable spice gardens and irrigated crops.

BOMBAY CITY

Situation, &c.

Bombay City.—The capital of the Presidency of Bombay, and the principal seaport of Western India, situated on an island in 18° 55′ N. and 72° 54′ E. Bombay Island is one of a group lying off the coast of the Konkan; but by the recent construction of causeways and breakwaters it is now permanently united on the north end with the larger island of Salsette, and so continuously with the mainland. The remainder of the group of islands constitutes a part of Kolāba District. For certain administrative purposes Bombay City is regarded as constituting a District by itself, with an area of 22 square miles, and a population, according to the Census of 1901, of 776,006. A special enumeration, in 1906, gave a total of 977,822.

Description. General aspect.

In the beauty of its scenery, as well as in the commercial advantages of its position, Bombay is unsurpassed by any city of the East. The entrance into the harbour from the sea discloses a magnificent panorama. The background is shut in by the range of the Western Ghāts. In front opens the wide harbour, studded with islands, dotted with the white sails of innumerable native craft, and affording a secure shelter to fleets of steamers. The city itself consists of well-built houses and broad streets ennobled by public buildings. The seashore is formed by docks, warehouses, and a long line of artificial embankments extending continuously for nearly 5 miles. On approaching Bombay from the west, there is little to strike the eye: the coast is low, the highest point, Malabar Hill, being only about 180 feet above the sea. But on entering the harbour a stranger is impressed with the picturesqueness of the scene. To the west the shore is crowded with buildings, some of them, as Colāba Church and the Rājābai Clock-tower of the University, very lofty and well-proportioned. To the north and east are numerous islands; and pre-eminent among the hills on the mainland is Bāva Malang, otherwise called Malanggarh, on the top of which is an enormous mass of perpendicular rock, crowned with a ruined fort. The harbour presents an animated and picturesque scene. There are usually a troopship

and a man-of-war of H.M.'s East India Squadron, together with numerous large passenger or merchant steamers, among which may be mentioned those of the Peninsular and Oriental Company, the British India Steam Navigation Company, the Messageries Maritimes, the Italian Rubattino, the Austrian Lloyd, the Clan, Anchor, and Hall lines. Many other steamers, and an occasional sailing vessel, are to be seen riding at anchor, swinging with the swiftly-flowing tide, and discharging or receiving cargo. All kinds of boats, ships' dingies, steam-launches, native *baghlas* and *padaos* incessantly ply on the harbour. At the southernmost point of the 'Prongs,' a dangerous reef jutting out from Colāba Point, stands the lighthouse, built in 1874, and containing a first-class dioptric light, which is visible for 18 miles.

Bombay Island.

The island consists of a low-lying plain about $11\frac{1}{2}$ miles long by 3 to 4 broad, flanked by two parallel ridges of low hills. Colāba Point, the headland formed by the longer of these ridges, protects the harbour lying on its eastern side from the force of the open sea; the other ridge terminates in Malabar Hill; and between the two lies the shallow expanse of Back Bay. The island is in shape a trapezoid. It is popularly likened to a hand laid palm upwards, with the fingers stretching southwards into the sea, and the thumb representing Malabar Hill, with Back Bay between the thumb and forefinger: others see in it a resemblance to a withered leg, with a very high heel and pointed toe, the heel being Malabar Hill and the toe Colāba. On a slightly raised strip of land between the head of Back Bay and the harbour is situated the Fort, the original nucleus round which the city grew up, but now chiefly occupied by public buildings and commercial offices. From this point the land slopes westward to the central plain, which before the construction of the embankment known as the Hornby Vellard, was liable to be submerged at high tide. To the north and east recent schemes of reclamation have similarly shut out the sea, and partly redeemed the foreshore for the use of commerce. In the extreme north of the island a large tract of salt marsh still remains unreclaimed.

The Fort. Public buildings, &c.

The Government offices, the business houses, and the shops cluster thickly in the Fort. Many of the public and commercial buildings, constructed during the past forty years, are of splendid dimensions, and have no rival in any other Indian city, except perhaps Calcutta. The houses in the native bazar are also handsomely built, rising three, four, and even six storeys in height, with elaborately carved pillars and front-

work. Some of the narrow, unpaved, and crowded streets give an inadequate idea of the real opulence of their inhabitants. But in many of them may be seen evidences of the wealth of the city and of the magnificence of its merchant princes. The most conspicuous line of public buildings is on the Esplanade facing Back Bay. Here are the Secretariat, an enormous erection in the Venetian Gothic style of architecture; the University Library, Senate Hall, and Rājābai Clock-tower; the High Court; the Public Works, Post, and Telegraph offices. A little inland, and behind the Secretariat range of buildings, runs the broad thoroughfare of Rampart Row, off which branch many narrow streets containing native and European shops. Rampart Row and its continuation towards the Apollo Bandar (landing-place) form the main line of thoroughfare of the European quarter. Along one side of Rampart Row is a colonnade of arches giving entrance to the Bombay Club, the French Bank, and other buildings. On the opposite side of Rampart Row, which is here 50 or 60 yards broad, rises another line of many-storeyed offices chiefly belonging to merchants in grain and cotton. The Fort is illuminated during the night by incandescent light. Arrangements have recently been completed for the installation of electric light, and of electric tramways to supersede the present horse tramways. Near the Apollo Bandar is the Sailors' Home, erected at the expense of a former Gaikwār of Baroda. The open crescent-shaped site opposite the Sailors' Home has been set apart for the erection of a Museum, of which His Royal Highness the Prince of Wales laid the foundation-stone in November, 1905. Behind the Sailors' Home is the Yacht Club, a favourite resort of Bombay society; adjoining it are the club residential quarters and the grand structure of the new Tāj Mahal Hotel. At the other end of Rampart Row is a white marble statue of Queen Victoria, under a Gothic canopy, the gift of the same Gaikwār. The most important buildings in the densely built space occupying the site of the Fort are the circular row of offices and warehouses known as the Elphinstone Circle, the Custom House, the Town Hall, the Mint, and the Cathedral. North of the Town Hall lies the Ballard Pier, whence passengers by the mail steamers land and where also they embark.

The Castle and Fort George are the only two spots now retaining any traces of the old fortifications. The existing defences of Bombay harbour are batteries on the rocks which stud the sea from about opposite the Memorial Church at

Colāba to the Elphinstone Reclamation. The one most to the south, called the Oyster Rock, is 1,000 yards from the shore and 8,400 feet south-west of the Middle Ground Battery. The fort on the Middle Ground shoal is in the middle of the anchorage, 1,800 yards from shore. The third defence is on Cross Island, at the north end of the anchorage, 100 yards from the shore and 4,000 yards from Middle Ground. There are also batteries at Malabar Point and Mahālakshmi on the western side of the island.

Other parts of the city.

On leaving the Bazar Gate police station, which represents the most northerly point of the Fort section, the first object of interest is the Victoria Terminus of the Great Indian Peninsula Railway, a very handsome building standing on the original site of an old temple of Mumbādevī. Opposite the station are the municipal offices, the foundation stone of which was laid by Lord Ripon in December, 1884. Immediately beyond them the new offices of the leading Bombay newspaper, the *Times of India*, have now been erected; and thence a few minutes' stroll will bring the visitor to the great markets, named after Mr. Arthur Crawford, who held the post of Municipal Commissioner from 1865 to 1871. North of the markets lies the native city proper. Two of the best-known thoroughfares in this portion of the island are the Kālbādevī Road and Abdur Rahmān Street, both of which lead to the Pāydhuni ('foot-wash') locality, so called from the fact that in very ancient times a stream flowed there, in which passers-by used to wash the dust of travel from their feet. Close to the junction of the Kālbādevī Road and Abdur Rahmān Street stand the modern temple and tank of Mumbādevī, the guardian goddess of the island. To the north of Pāydhuni there are two interesting buildings, namely, the city jail in Umarkhādi built in 1804 under the administration of Jonathan Duncan, and the Jewish synagogue called 'The Gate of Mercy.' The latter was erected by a member of the Bani-Israil community named Ezeckiel, who served in the Bombay army during the campaign against Tipū Sultān. Having been captured, he was about to be executed with other prisoners, when the mother of Tipū begged that his life might be spared, and her request was seconded by the chief Munshi, who declared that Ezeckiel belonged to a race known as 'the chosen of God.' He was accordingly taken into Tipū's service; but he managed at length to escape to Bombay, where, in gratitude for his deliverance, he built the synagogue. Leaving the Tādvādi and Mazagaon sections, which contain several features of interest, as for example the Victoria

Gardens in the former and the temple of Ghorupdeo in the latter, and journeying northward, one reaches the historic locality of Parel. It was here and in the neighbouring villages of Naigaon, Vadāla, and Mātunga that Bhīma Rājā and his followers settled on their arrival from the Deccan about 1294. In later times Parel was the favourite quarter of the European inhabitants, and contained the official residence of the Governor of Bombay. It has now yielded place as a fashionable European quarter to Malabar Hill and Cumballa Hill (a continuation of the former), both of which are covered with handsome houses and bungalows. The views obtainable from the ridge of Malabar Hill and the summit of the Altamont Road, which winds up Cumballa Hill, are magnificent. Standing by night upon the ridge, one looks down upon the palm-groves of Chaupāti, and across the sweep of Back Bay to the Rājābai Clock-tower, the Secretariat, and the Lighthouse at Colāba Point, the whole curve of land being jewelled with an unbroken chain of lights, which have earned the appropriate title of 'The Queen's Necklace.' From Cumballa Hill the view to the east includes the entire native town, the hill of Mazagaon, upon which, in early days, a whitewashed house stood as a guide for vessels entering the harbour, and beyond them the harbour, islands, and mainland of the North Konkan. To the left lies the industrial area, with its high chimney-stacks and mill roofs, and the coast section of Siwri, in which may still be seen relics of the old fortress built upon a projecting spit of land. Siwri in these days contains the European cemetery, which was originally the garden of the Horticultural Society of Bombay. On the west side Cumballa Hill slopes down to the shore, where, close to the Hornby Vellard, the Mahālakshmi temples command attention. The present shrines are comparatively modern; but they are stated to stand upon the site of three very old temples which were destroyed during the period of Muhammadan domination. The temples form the northern limit of another suburb, known as Breach Candy, where the houses are built close down upon the seashore within the refreshing sound of the waves. The ruined fortress of Warli can be visited from this point, while a good road leads through the great coco-nut woods of Māhīm to the Lady Jamsetjī Causeway and the neighbouring island of Salsette. The causeway was opened in 1845, up to which time communication between Bombay and Bāndra, the southernmost village in Salsette, had been carried on by means of ferry-boats.

At Malabar Point the Governor of Bombay has a pretty

marine villa, in which he spends the cold season of the year. During the hot season the Bombay Government repairs to Mahābaleshwar, while it spends the rainy or monsoon season at Poona. Not far from Malabar Point lie the ruins of the old temple of Wālkeshwar, which was built by the Silāhāra dynasty some time between A.D. 810 and 1260. Other interesting religious monuments in the island are the tomb of a Musalmān *pīr* at Māhīm and the great Jāma Masjid in the city. The former was built about 1431 in memory of Shaikh Alī Paru, and is the only architectural legacy to Bombay of early Muhammadan rule. The shrine, which was repaired and enlarged in 1674, is surmounted by a dome, the inner side of which is ornamented with a gilt inscription in Arabic characters recording the name and dates of the birth and death of the saint. An annual fair is still held here, which is attended by Muhammadans from all parts of India. The Jāma Masjid was built in 1802.

Climate.

Bombay never attains great extremes of heat or cold, such as are encountered in the interior of India; but the climate, though temperate, is oppressive, owing to the extreme saturation of the air with moisture during the greater part of the year. The cold season lasts from December till March. In June the south-west monsoon breaks, and heavy rain continues with great regularity till the end of September. The hottest months are May and October. The average rainfall for the twenty years ending 1901, as registered at Colāba Observatory, was 74·27 inches, the maximum being 99·74 and the minimum 35. The average temperature is 79·2°.

In the year 1904 the chief causes of mortality were plague (13,504), fever (2,392), and diseases of the respiratory system (7,315).

History. Early inhabitants.

Originally Bombay consisted of seven separate islands, and formed an outlying portion of the kingdom of Aparānta or the North Konkan, of which the earliest ruler known to history was named Asoka. To him succeeded a dynasty of Sātakarnis or Sātavāhanas, who flourished about the second century A.D., and were in turn succeeded by Mauryas, Chālukyas, and Rāshtrakūtas. The earliest inhabitants of the islands were the Kolīs, an aboriginal tribe of husbandmen and fisherfolk, who must have journeyed thither about the opening of the Christian era, and formed rude hut settlements in those portions of the island which are now known as Upper Colāba, Lower Colāba, Dongri, Mazagaon, Naigaon, Sion, Māhīm, and Warli. The island takes its name from the Kolī goddess Mumbā, a form

of Pārvatī, whose temple, as above mentioned, formerly stood close to the site now occupied by the Victoria station.

Hindu and Muhammadan rulers.

In the Maurya and Chālukya periods (*c.* A.D. 450–750) the city of Purī on ELEPHANTA island was the chief place in Bombay harbour; but under the Silāhāra chiefs of the Konkan (810–1260) Bombay became better known through the discovery of the Shrigundi or 'stone of trial' and the building of the Wālkeshwar temple at Malabar Point. But no town sprang up until Rājā Bhīma, who probably belonged to the house of the Yādavas of Deogiri, founded Mahikāvati (Māhīm) as a direct result of Alā-ud-dīn Khiljī's raid into the Deccan in 1294. Bhīma's followers, among whom the Prabhus, Palshikar Brāhmans, Panchkalshis, Bhandāris, Bhois, and Thākurs were the most noteworthy, spread over the island and settled in Māhīm, Siwri, Naigaon, Mātunga, Vadāla, and Parel. Representatives of these classes are found in Bombay to-day, while many place-names in the island undoubtedly date back to this era of Hindu rule, which lasted till 1348, when Salsette and Bombay were conquered by a Muhammadan force from Gujarāt. The islands remained part, first of the province, and then of the kingdom, of Gujarāt until 1534, when Sultān Bahādur ceded them to the Portuguese. With the exception of the well-known shrine at Māhīm and one distinct class of the population, the Konkani Muhammadans, the era of Muhammadan rule has left little trace upon modern Bombay, for the Sultāns of Gujarāt contented themselves with establishing a military outpost at Māhīm, and delegated their administrative powers to tributary Hindu chieftains.

Portuguese rule.

The Portuguese were no more successful in the work of colonization than their immediate predecessors. The lands were gradually divided by them into manors or fiefs, which were granted as rewards to deserving individuals or to religious orders on a system known as *aforamento*, whereby the grantees were bound to furnish military aid to the king of Portugal, or, where military service was not deemed necessary, to pay a certain quit-rent. The northern districts were parcelled out among the Franciscans and Jesuits, who were responsible for the building of several churches on the island, notably that of Our Lady of Hope on the Esplanade, now destroyed, and those of St. Michael at Māhīm and of Our Lady of Salvation at Dādar, which exist to this day. The Quinta or Manor House, built some time in the sixteenth century, stood upon the site of the modern arsenal behind the Town Hall, and was surrounded by a lovely garden. It was partly burnt by the

Dutch and English in 1626, but remained standing in a more or less dilapidated condition until 1665, when Donna Ignez de Miranda, the proprietress of the Manor of Bombay, handed it over to the British representative, Humphrey Cooke. The intolerance of the Portuguese had seriously hindered the growth of the settlement, which, when it was transferred to the English, had a population of some 10,000, mostly Kolīs, Agrīs, and other low castes, with a sprinkling of Prabhus, Brāhmans, and Muhammadans.

Cession to the English, 1661.

The English had coveted Bombay for many years before it came into their possession under the terms of the marriage treaty between Charles II and the Infanta of Portugal. They had endeavoured to seize it by force in 1626; the Surat Council had urged the Directors of the East India Company to purchase it in 1652; and the Directors in their turn had pressed upon Cromwell the excellence of the harbour and its natural isolation from attack by land. But it was not until 1661 that Bombay was ceded to the English king, nor until 1665 that Humphrey Cooke took possession of the island on his behalf. The revenues at the date of the cession were not large, accruing mainly from taxes upon rice lands, oil, and *ghī*, and upon the coco-nut and brab palms which grew in abundance between the *maidān* or Esplanade and Malabar Hill. Moreover, so averse were the Portuguese in India to the cession, that they retained their hold upon the northern portion of the island, declaring that it was private property; and it was only by the vigorous action of Cooke and his immediate successors that Māhīm, Sion, Dhārāvi, and Vadāla were taken from the Portuguese religious orders and incorporated with the island proper.

Transfer to East India Company. Gerald Aungier.

The island was transferred in 1668 from the Crown to the East India Company, who placed it under the factory of Surat. The real founder of modern Bombay was Gerald Aungier (1669–77), who believed in the future of 'the city which by God's help is intended to be built,' and increased its population to 50,000 by the measures which he took for the settlement of the land revenue, the establishment of law courts, the strengthening of the defences, and the securing of freedom of trade and worship to all comers. Among the most important of the new settlers were Baniās, Armenians, and Pārsīs.

In the later years of the seventeenth century the settlement became so unhealthy through the silting up of the creeks that separated its component islands and through the prevalence of plague and cholera (*mordexin*), that it was said that 'two mon-

soons were the life of a man.' Progress was further checked by quarrels among the leading men and the rivalry between the old and the new East India Companies. The steady unfriendliness of the Portuguese and the prevalence of piracy made trade unsafe, and supplies for the large population hard to obtain, while down to 1690 the Sīdī admirals of the Mughal fleet were frequent but unwelcome guests of the English, who did their best to trim between them and the Marāthās.

Progress during early part of eighteenth century.

In 1708 a brighter period began with the union of the two Companies, which was followed by the transfer of the Governor's head-quarters from Surat to Bombay. The two great needs of the time were a base of supplies on the mainland and the suppression of piracy. The former object was attained in 1733 by an alliance with the Sīdīs, but the pirates, though held in check, were not yet suppressed. The Marāthā conquest of Bassein and Salsette (1737–9) put an end to the hostility of the Portuguese, but warned Bombay to strengthen its forces by sea and land against a more dangerous enemy. The town wall had been finished in 1718, and settlers again flocked in, especially from distracted Gujarāt.

The dockyards were extended under the superintendence of a Pārsī 'wadia' or ship-builder from Surat, Lowjī Nasarwanjī, who arrived in Bombay in 1736; a marine was established about the same date: a criminal court was created in 1727, and a mayor's court in 1728 for the settlement of civil disputes; and a bank for the encouragement of trade and agriculture was established in 1720. Severe measures were taken for the prevention of treachery, as evidenced by the historic trial and conviction of Rāma Kāmāthī; monetary loans were granted, and other conveniences afforded, to various classes, such as the weavers and small traders, whose settlement it was held desirable to stimulate. As a result, the population had expanded to 70,000 by the year 1744, and the revenues of the island had risen to about 16 lakhs as compared with about Rs. 37,000, which it had yielded to the Portuguese. The most notable building in the Fort at this time was St. Thomas's Church, which was opened by Governor Boone on Christmas Day, 1718.

1740–69.

The defences of the town were further strengthened by reason of the French Wars (1744–8 and 1756–63), and the influx of settlers from the mainland made the question of supplies as well as that of the protection of trade from piracy more pressing. Both were in a measure secured by an alliance with the Peshwā, which resulted in the acquisition of Bānkot (1755) and

in the destruction of the pirate nest at Vijayadrug by a force under the command of Watson and Clive (1756). The occupation of Surat castle (1759) and the capture of the forts of Mālvān and Reddi (1765) were further steps taken in the interests of trade. This period witnessed the opening of two new docks at Bombay, one being completed in 1750 and the second in 1762, and a further increase in the number of vessels. Regulations were also passed for the preservation of good order on the island; a town scavenger was appointed; building rules were promulgated in 1748; advances were made from the Land Pay Office to the poorer inhabitants whose dwellings had been destroyed by fire; passage-boats between Bombay and the mainland were organized into a regular service; and a Court of Requests was instituted in 1753 for the recovery of debt. As a result, a very large increase of population took place; and so many houses were built in the native town that many of them had eventually for safety's sake to be removed. Grose referred in 1750 to the enormous amount of building which had taken place in the 'oarts' (gardens) and groves; and new thoroughfares were continually being opened throughout the period. The old Government House at Parel is first spoken of in these years as 'a very agreeable country-house, which was originally a Romish chapel, belonging to the Jesuits, but was confiscated about 1719 for some foul practices against the English interest.' The building has long been deserted by the Governors of Bombay, and is at present utilized as a laboratory for plague research.

1770–1817.

It was the wish to acquire Salsette as a defence and a base of supplies that led the Bombay Council to enter the field of Marāthā politics (1772). The history of the transactions that ended in the formation of the modern Presidency is dealt with elsewhere. (*See* BOMBAY PRESIDENCY, History.) In the island itself great improvements were made. A tariff of labour rates was formulated; a better system of conservancy was enforced in 1777; hospitals, to which Forbes refers in the *Oriental Memoirs*, were erected in 1768 and 1769; an accurate survey of the land was carried out; a proper police force was organized about 1780 in place of the old Bhandāri militia; and in 1770 the cotton trade with China was started, in consequence of a severe famine in that country, and an edict of the Chinese Government that a larger proportion of the land should be utilized for the cultivation of grain. The orderly extension of the native town was also taken in hand about 1770; crowded and insanitary houses were in many cases removed; the

Esplanade was extended and levelled; new barracks were built; and every encouragement was given to the native community to build their dwellings at a greater distance from the Fort. The great Vellard, which takes its name from Governor Hornby (1771–84), was erected during this period, which, by uniting the southern boundary of Warli with the northern limit of Cumballa Hill, shut out the sea from the central portions of the island, and rendered available for cultivation and settlement the wide stretch of the flats. The traveller Parsons, who visited the island in 1775, speaks of the town as 'nearly a mile in length from the Apollo Gate to that of the Bazar, and about a quarter of a mile broad in the broadest part from the *bunder* across the green to Church Gate, which is nearly in the centre as you walk round the walls between Apollo and Bazar Gates. Between the two marine gates is the castle, properly called Bombay Castle, a very large and strong fortification which commands the bay; and the streets are well laid out and the buildings so numerous as to make it an elegant town.'

In 1798 the mayor's court gave place to that of a Recorder. In 1800 this court was held in Governor Hornby's house, which is familiar in these days as the Great Western Hotel; and there Sir James Mackintosh, who succeeded the first Recorder in 1802, used to decide civil and criminal suits. In 1793 the Governor and Members of Council were the only Justices of the Peace in Bombay, and in 1796 sat in a court of quarter sessions, inviting two of the inhabitants to sit with them. This system continued till 1807, when the Governor and Council were empowered to appoint a certain number of the Company's servants or other British inhabitants to act as justices under the seal of the Recorder's Court. Two notable events at the commencement of the nineteenth century were the famine of 1803, which drove a vast number of people from the Konkan and the Deccan to seek employment in Bombay, and the great fire which broke out in the Fort in the same year. Though the damage done to house property was enormous, the conflagration enabled the Government to open up wider thoroughfares in the most congested parts of the Fort; and it acted as a great incentive to the native community to build their houses, shops, and godowns outside the Fort walls, and in those areas which are now the busiest portion of the city. The abolition of the Company's monopoly of the Indian trade in 1813 led to a great increase in the number of independent European firms and largely improved the export trade in raw cotton.

1818–39. The conquest of the Deccan in 1817–8 put an end to the

Expansion of Bombay Presidency and city.

Marāthā troubles and transformed Bombay from a trading town into the capital of a large Province. The Recorder's Court was replaced in 1823 by the Supreme Court. The Borghāt road to Poona was opened in 1830, and a regular monthly mail service to England by the overland route was established in 1838. The same year saw the construction of the Colāba Causeway, which united the last of the original seven islets to the main island of Bombay, and was immediately followed by commercial speculation in recovering a certain portion of ground for building factories, wharves, and for the greater facility of mercantile operations. A new hospital was built in Hornby Row in 1825, a new Mint was opened in 1827, and the well-known Town Hall was completed after a series of vicissitudes in 1833. The Bishopric of Bombay was constituted in 1835, and in 1838 the old church of St. Thomas became the cathedral of the diocese.

1840-70. The cotton boom. Development of the city.

The year 1840 marked the commencement of a period of progress and prosperity. The first sod of the Great Indian Peninsula Railway was turned in 1850; the first 20 miles to Thāna were laid by 1853; and ten years later the Borghāt incline was opened. The Bombay, Baroda, and Central India Railway was completed from the north as far as Bombay in 1864. In 1855 the first contract was made with the Peninsular and Oriental Company for a fortnightly mail service, which became weekly in 1857. The Austrian Lloyd, the Rubattino, and the Anchor lines at this time (1857) started regular services. The first Bank of Bombay was opened in 1840; and by 1860 there were at least six large banking corporations, all holding an assured position. Industrial enterprises and schemes, such as the Elphinstone Reclamation scheme, were promoted; the great Vehār water-works were constructed; the first tramway communications were opened in Colāba in 1860; a scheme of drainage was formulated in 1861; and in 1857 the first spinning and weaving mill commenced to work. By 1860 six more mills had been opened, and Bombay had become the great cotton market of Western and Central India. Between 1861 and 1865 occurred the enormous increase in the cotton trade which was brought about by the outbreak of the Civil War in America. The supply of the American staple being suddenly cut off, Lancashire turned eagerly to Bombay for a substitute, and poured into the pockets of the mercantile community about 81 millions sterling over and above the former price for their cotton. An unexampled exportation of cotton continued as long as the war was carried on. 'Financial associations,' as

Sir Richard Temple wrote in *Men and Events of My Time in India*, 'sprang up like mushrooms; companies expanded with an inflation as that of bubbles; projects blossomed only to decay.' Suddenly, when commercial delirium was at its height, the American War ended. The price of Bombay cotton at once fell fast, and the whole elaborate edifice of speculation toppled down like a house of cards. Nevertheless the commercial stability of the city suffered no permanent damage, and modern Bombay was literally built up and established during those years. The wealth of the speculators of the early sixties was sunk in the engineering and reclamation schemes, which pushed back the sea and gave the island her splendid wharf accommodation. It was they who presented Bombay with her University Library Buildings, the Rājābai Clock-tower, the Jamsetjī Jījībhoy School of Art, and the Mechanics' Institute. The Government aided private enterprise in the task of beautifying and improving the island; and it was during this period that those great schemes were formulated which have endowed the city with the unrivalled line of public buildings facing Back Bay, with the Elphinstone Circle, with admirable railway workshops, with a fine dockyard at Mazagaon, with new police courts and lighthouses, with the Wellington Memorial Fountain and the European General Hospital. Room was made for many of these improvements by the demolition of the walls of the Fort in 1862.

Great changes took place at this time in municipal administration. In 1858 a triumvirate of municipal commissioners was appointed for the control of urban affairs, which was succeeded in 1865 by a body corporate composed of justices for the city and island, the entire executive power and reponsibility being vested in a commissioner appointed by Government for a term of three years. This system existed until 1872, when a new municipal corporation, consisting of sixty-four persons, all of them ratepayers, was established by law. Considerable progress was made in sanitation and communications. An efficient Health department was organized in 1865; many old and dangerous graveyards were closed between 1866 and 1871; special committees were appointed to deal with the drainage question; new markets were built, notably the Crawford Markets, which were opened in 1869 and form one of the most useful of all the public improvements executed in Bombay; the water-supply of Vehār was increased; the Tulsī waterworks were commenced; the Oval and Rotten Row were laid out as recreation grounds; and the reclamation of the flats

with town-sweepings was after much discussion taken in hand.

Development up to present day.

Between 1872 and 1881 railway communication was extended across the continent of India and steam navigation along the coast. The mill industry throve apace, and gave employment in 1882 to about 32,000 persons. The Tulsī water-works were completed in 1879; the Port Trust, established on the model of the Mersey Board in 1873, opened the Prince's Dock in 1880; new roads were constructed in various parts of the island; the lighting of the city was extended; the Victoria Gardens, the Elphinstone Circle Garden, and the Northbrook Garden in the poorer portion of the city were laid out between 1873 and 1874; while in 1878 the municipality raised a loan of 27 lakhs for drainage purposes, and commenced the task of laying a new main sewer from Carnac Bandar to Love Grove, and a new outfall sewer, pumping station, and pumping plant at Warli. The resources of Bombay were tested in 1878, when an expeditionary force was dispatched to Malta: within fourteen days after the receipt of orders the Bombay Government engaged 48,000 tons of merchant shipping and dispatched from the port 6,000 men and 2,000 horses with two months' supplies of provisions and six weeks' supply of water. Again in 1899 the salvation of Natal directly resulted from the promptitude with which Bombay carried out the embarkation and dispatch to South Africa of a large military force.

The water-supply of the city was further improved by the opening of the Pawai works in 1889, and of the great TĀNSA works in 1891–2. Between 1872 and 1891 much attention was paid to education, with the result that the Census of 1891 showed an increase of 46,000 in the number of literate persons. Schools for deaf-mutes were subsidized; the Victoria Jubilee Technical Institute was founded by Lord Reay's Government; tramway communications were greatly extended; a good fire brigade service was organized; special cholera and small-pox hospitals were erected for the benefit of the poorest classes; and the streets were cleared of lepers to a great extent by the opening of the Mātunga Leper Asylum, in which the victims of this unsightly disease are so well cared for that they feel no temptation to stray away. The export and import trade showed a remarkable increase during the ten years prior to 1891, while the mill industry assumed such large proportions that legislation for the regulation of female and child labour became imperative in 1890. Not only had sections of the city proper, such as Māndvi and Dhobi Talao, been choked with buildings

in such a way that their original character was wholly obliterated; but the northern sections of the island, such as Parel, Byculla, Tādvādi, Nāgpāda, and Chinchpugli, had expanded through the progress of industrial enterprise into the populous dwelling-places of a large immigrant population.

The great influx of labourers which took place between 1860 and 1890 has been indirectly responsible for the continued presence and virulence of the plague, which broke out for the first time in 1896. The congested state of many streets, and the monstrous overcrowding of houses, which were erected to accommodate a great influx of population, have proved highly favourable to the spread of a disease which, for more than seven years, has played havoc with the cotton industry and with trade, and has raised the death-rate of the city and island to an alarming figure. It is the object of the City Improvement Trust, created by Lord Sandhurst's Government, to open out such localities, and, by the erection of model dwellings for the artisan classes, to combat successfully the spread of evils, such as plague and phthisis, which at present flourish unchecked in the moist and infected air of the industrial quarters.

Population. At the time of the cession of Bombay to the English, the population is stated by Dr. John Fryer in his *New Account of East India and Persia* (1698) to have been 10,000; and, according to Niebuhr, it had increased to 70,000 in 1744. In 1780 a special committee, appointed to inquire into the price of food-grains, was furnished with a rough census of all residents, which totalled 113,726. By 1814 this number had, according to a contemporary writer, risen to 180,000; and an estimate recorded in 1836 showed a further increase to 236,000. Ten years later the benefits of peace, growth of commerce, and improvement of communications had raised the total to 566,119. On the initiative of Sir Bartle Frere a properly organized census was for the first time taken in 1864, which recorded a total population of 816,562. This abnormal figure, which was mainly due to the extraordinary prosperity which Bombay enjoyed during the American War, decreased in 1872 to 644,405; but the decrease was the natural outcome of the reversion of Bombay commercial life to its ordinary groove, and was in no wise permanent, as is apparent from the census figures of 1881 and 1891, which amounted to 773,196 and 821,764 respectively. According to the Census of 1901 the population of the area administered by the Bombay municipality, which is coextensive with Bombay island, in an area of

22 square miles, is 776,006[1]. This figure includes 37,681 persons who are described as homeless, as the harbour population, or as travellers by the railway. The density of population per acre for the whole island is 51, but this figure varies largely in different areas. In Kumbārwāda, for example, there are 598 persons to the acre, in Khāra Talao 556, in Second Nāgpāda 546, in Chakla 472, and in Umarkhādi 460; whereas in Sion there are only 5 persons to the acre, in Siwri 20, in Māhīm 21, and in Warli 25. It will be apparent from these figures how suitable a field is afforded by the northern portions of the island for the wider and more healthy distribution of the inhabitants. The extension of electric traction, which the municipality is at present endeavouring to establish, will draw off the surplus population of the central portions of the city and lower the death-rate. The average population per inhabited house is 24·5 for the whole island, rising to 35 in B ward, which includes Chakla, Māndvi, Umarkhādi, and Dongri, and sinking to 15 in G ward, which comprises Māhīm and Warli. The great poverty of the majority of the inhabitants is shown by the fact that 80 per cent. of the whole number occupy tenements containing only a single room, the average number of dwellers in such a room being about 5. Instances were discovered in 1901 of 39, 43, and 54 persons occupying and sleeping in a single room; while three of the largest tenement houses in the central part of the island gave shelter to as many as 587, 663, and 691 individuals. The proportion of males in the total population is over 61 per cent. The number of females to 1,000 males varies considerably by localities, there being 770 in Dongri and only 234 in the southern portion of the Fort. A very large proportion of the male inhabitants come to Bombay only for a few months in search of work, leaving their families in their native villages. The number of children under one year of age had sunk in 1901 to the very low figure of 9,900; but this was brought about by a high rate of mortality among infants since 1897 and an abnormally low birth-rate.

Before the outbreak of the plague in 1896 the average death-rate for the whole population was 24 per 1,000. Since 1896 it has risen to 78. The birth-rate is as low as 14 per 1,000; but this is no indication of the true natural increase, the majority of the population being immigrants whose women return to their homes at the time of maternity.

Only 23 per cent. of the total population claim the island

[1] The population in 1906 was 977,822, according to a special Census.

as their birthplace; and the proportion of those born in Bombay is highest in sections like Dhobi Talao and Chakla, which are inhabited respectively by Pārsīs and Konkani Muhammadans, who are really indigenous. The District of Ratnāgiri in the Konkan supplies Bombay with most of her mill-hands and labourers, while Cutch and the Gujarāt Districts furnish large numbers of the trading classes.

Component races. Hardly any city in the world presents a greater variety of national types than Bombay. The Hindus and Muhammadans of course predominate, but in the busy streets the characteristic dress of every Oriental people may be seen. The green and gold turban of the Musalmān, the large red or white head-dress peculiar to the Marāthā, the pointed red turban of the Gujarāti Baniā, and the black or brown brimless hat of the Pārsī lend colour and variety to the scene. In Dongri and Māndvi one meets members of well-known commercial classes, such as the Osvāl Jains; in Chakla will be found the Konkani Muhammadans, a very rich and influential community, who trace their descent from the ancient 'Nawaits,' the children of Arab fathers and Hindu mothers, and who have gradually risen from the position of ships' officers, sailors, and boatmen to that of prosperous and educated merchants. The Sīdīs, who are descended from the warriors of Sīdī Sambhal and from Zanzibar slave immigrants, will be seen in the Umarkhādi quarter; the Bani-Israil, whose ancestors were wrecked off Chaul in the thirteenth century, are settled in the same neighbourhood; the Julāhās, a poor and somewhat turbulent class of Muhammadan weavers, are met with in Nāgpāda; the portion of Dhobi Talao known as Cavel shelters large numbers of Goanese and native Christians, who have regarded this locality as their stronghold since the era of Portuguese dominion; the unmistakable head-gear of the Arabs is constantly met with in Byculla; Parel and Nāgpāda are peopled by the lower and industrial classes from the Deccan and the Konkan; while hidden away in many corners of the island are small groups of Kolīs, the lineal descendants of the earliest Bombay settlers known to history. The Pārsīs exercise an influence much greater than is implied by their numbers. They began to settle in Bombay soon after the cession of the island to the English; and now by the force of their inherited wealth, their natural genius for trade, their intelligence, and their munificent charities, they hold high rank among the native community. Their position was recognized by the Crown when Sir Jamsetjī Jījībhoy received a baronetcy in

1857; and the representative of his family was chosen to represent the city of Bombay at the coronation of the King-Emperor in 1902. Next in importance to the Pārsīs are the Hindu traders or Baniās, who may be divided into two classes, those of Gujarāt and the Mārwāris from Rājputāna. A large proportion of both these classes adhere to the Jain religion, while not a few of the remainder belong to the Vaishnav sect, especially to the sub-denomination known as Vallabhāchāryas. The Muhammadans include representatives from all the great countries that have embraced Islām—Arabs, Persians, Turks, Afghāns, Malays, and Africans. The three classes of trading Muhammadans—the Memons, Bohrās, and Khojas—are especially numerous. The spiritual head of the last-named community, His Highness the Aga Khān, was among the representative men invited to His Majesty's coronation in 1902. The commercial dealings of these three classes are chiefly with the Persian Gulf, Zanzibar, and the east coast of Africa; but many of them do not shrink from visiting Europe for trade purposes, and are ready to take advantage of the improved means of communication now existing between Bombay and the rest of the world. The Pārsīs and Jews compete with the English in the markets of Europe.

Religion and language.

The following table gives the population of the city in 1901 classified according to religion:—

Religion.	Number.	Percentage.
Hindus	508,608	65·54
Muhammadans	155,747	20·07
Christians	45,176	5·82
Pārsīs	46,231	5·96
Jains	14,248	1·83
Jews	5,357	·70
Others	639	·08
Total	776,006	100·00

Some idea of the cosmopolitan character of Bombay can be formed from the fact that 62 different languages or dialects are spoken within its limits. Marāthī and Gujarātī are the most widely prevalent, the latter being the main commercial language of the island. A considerable number of Muhammadans are bilingual from an early age, speaking Hindustānī in their homes but conducting their daily business in Gujarātī. In the same way Gujarātī and English are equally well-known to many members of the Pārsī community.

Of the total area of the island a considerable portion is still

Cultivation. cropped. The chief crop grown is rice; but many varieties of garden vegetables are also cultivated, particularly onions and several members of the gourd tribe. The tending of coco-nut trees, and the preparation of intoxicating drink from this tree and other species of palms, afford employment to a considerable section of the population. The original toddy-drawers of Bombay were the Bhandāris, who at present number nearly 17,000 persons; but a large number of them discarded their hereditary pursuit in favour of military, police, and other duties during the eighteenth century, and they are found engaged at the present day in many different occupations. The Bombay mangoes are said to have been improved from grafts by the Jesuits and Portuguese priests; and it was from the Mazagaon groves that the royal tables at Delhi, in the time of Shāh Jahān, were supplied. They have long been famous throughout India for their delicate flavour; and there exist to this day in Mazagaon two noted trees which bear a double crop of mangoes every year. The Bombay 'pummelo,' a shaddock which looks like a large orange, is also a favourite fruit.

Manufactures. Bombay supports all the many industries incidental to the active life of a great city and seaport. The trades of dyeing, tanning, and metal-working are especially prosperous. The School of Art has done much to encourage those technical faculties which depend upon an artistic and scientific education; and the work of its pupils, at the Art Exhibition held during the Delhi Darbār of 1903, earned very high approbation. But the characteristic feature of Bombay manufacture is the rapid growth of the European factory system—mills, worked by steam and employing a large number of operatives, having been erected by local capital, especially in the northern suburbs, where the tall chimney-stacks recall a factory town in Lancashire. Between 1881 and 1903 the total number of factories in the island rose from 53 to 143, the increase being mainly due to the construction and opening of new spinning and weaving mills; while the number of persons engaged in the manufacture and sale of cotton in 1901 was 131,796, or 17 per cent. of the total population, as compared with 101,821 in 1891. This increase of the industry during the last decade has taken place in spite of very great disorganization caused by the plague, and in spite of a decline in the Chinese demand for Bombay's production. Since 1897 the mill industry passed through a grave crisis, resulting to some extent from an unsuitable and improvident system of manage-

ment. The better-conducted mills, however, such as those of the great Pārsī capitalist, the late Mr. Jamsetjī N. Tāta, have made and still continue to make a steady profit from their yarns and piece-goods. The industry has proved an inestimable boon to many of the poorer inhabitants of the Konkan and the Deccan, who, without the steady wages which it offers, might have fared ill during the famines of the last few years. At Mātunga there are twenty-four salt-works, which yield an annual revenue of $17\frac{3}{4}$ lakhs.

Trade.

The latter half of the nineteenth century witnessed a remarkable development of the trade of the port. In 1854–5 the whole trade of Bombay was valued at 16 crores, and twelve years later (1866–7) it rose to 47 crores. The yearly average for the succeeding five years was 51 crores. Between 1876–7 and 1895–6 the total value of imports and exports, including the coasting trade, steadily increased from 61 crores to 105 crores. The constant demand from distant markets, coupled with a considerable improvement of communications, has brought about a rise under every head of imports and exports during the last twenty-five years, the most noticeable increase under the former category being in sugar and cotton manufactures, and under the latter in grain, cotton twist and yarn. The total value of the sea-borne trade passing through Bombay in 1903–4 was 123 crores (exports 64 crores, and imports 59 crores), of which 101 crores represent trade with countries beyond India. The chief exports are raw cotton, grain, seeds, cotton twist and yarn; the chief imports are cotton goods, metals, and machinery. The number of vessels, sailing and steam, which entered and cleared with cargoes from and to foreign countries at the port of Bombay in 1903–4 was 1,607, with a tonnage of 2,764,303. (For further particulars of sea-borne trade, *see* the article on the BOMBAY PRESIDENCY.)

Bombay possesses a Chamber of Commerce with 116 members representing 200 firms, and a committee of 12 elected annually, whose deliberations are presided over by a chairman. The Chamber is represented on the Legislative Council, the municipality, the Port Trust, and the Bombay Improvement Trust. There is also a special association for protecting and furthering the interests of the cotton industry, styled the Bombay Mill-Owners' Association. Over 100 mills are represented on the general committee, and the opinion of the association therefore carries great weight on all questions connected with the industry. Founded in 1868, the association has

witnessed an increase from 3 to 143 mills in the territory from which it draws its members.

Revenue and municipal administration.

The Government land revenue, amounting to 3 lakhs annually, is under the charge of an official styled the Collector of Bombay, who is a member of the Covenanted Civil Service, and also performs the functions of Collector of Opium and Abkāri (Excise) and Income-Tax Commissioner. The Presidency Stamp and Stationery offices and the Steam-Boiler Inspection department are also in his charge, and he is assisted by one Indian Civilian, who is Chief Inspector of the numerous factories in the island. The administration of the Sea Customs is in charge of a Collector, aided by an assistant, both of whom belong to the Imperial Customs Department. The ordinary local administration is vested mainly in the Bombay municipality, which, as constituted by Act III of 1888, consists of 72 members—36 elected by the ratepayers, 20 by the Chamber of Commerce, the University, and the Justices of the Peace, and 16 appointed by Government. The corporation thus constituted possesses extensive powers, and elects its own president and eight out of twelve members of a standing committee which deals with ordinary business. The other four members of this committee are appointed by Government. A chief executive officer, known as the Municipal Commissioner, is appointed by Government, usually from the ranks of the Indian Civil Service. The revenue and expenditure of the corporation is shown in the table on p. 236. The general tax which contributes a large proportion of the revenue consists of a tax on houses and lands, fixed at 10½ per cent. on the gross annual value of houses and lands, the ½ per cent. being devoted to the maintenance of a fire brigade. The tax produces an annual revenue of 25 lakhs, to which are added contributions of about one lakh and 2 lakhs paid respectively by Government and the Port Trust. The municipality has raised loans amounting in 1904 to about 479 lakhs, mainly for the provision of an adequate water-supply and drainage works.

Justice.

Justice is administered by the Bombay High Court, which, in addition to the appellate and revisionary powers which it exercises throughout the Presidency, is a court of first instance for causes arising within the island of Bombay. A Small Cause Court and four Presidency Magistrates exercise jurisdiction in minor civil and criminal matters. The former takes cognizance of suits not exceeding Rs. 2,000 in value arising within the island. Four benches of honorary magistrates were established in 1903 to deal with minor misdemeanours.

The city police force, under a Commissioner, who is directly subordinate to Government, consists of 2,126 officers and men, 83 of whom are mounted. The force includes 72 Europeans. There are six Europeans in the sanitary police, a temporary body working under the Port Health Officer, but subordinate to the Police Commissioner as regards discipline and promotion. The Commissioner is assisted by a deputy and eight Superintendents. The municipal corporation pays a fixed contribution of 5 lakhs towards the cost of the force. There are two special jails in the city, called the House of Correction, which is at Byculla, and the Common Prison, at Umarkhādi. The question of constructing a new prison is under the consideration of Government.

Police and jails.

Bombay is the head-quarters of the Bombay brigade, which falls in the Poona division of the Western (Southern) Command, and is commanded by a Brigadier-General. The garrison consists of three companies of garrison artillery, one company of the submarine mining corps, one British and two Native infantry regiments[1], and five corps of volunteers. The volunteers comprise the Bombay Light Horse, the Bombay Volunteer Artillery, the Great Indian Peninsula Railway Volunteer Rifles, the Bombay, Baroda, and Central India Railway Volunteers, and the Bombay Volunteer Rifle Corps, with an aggregate in 1906 of 1,043 men. In Bombay are also stationed the Director and Assistant Director of the Royal Indian Marine, which is the modern representative of the old Bombay Marine and Indian Navy. The Royal Indian Marine, which chiefly performs trooping, station, and marine-surveying duties, possessed, in 1906, eighteen vessels manned by 97 superior officers, 71 engineers, and 1,439 men, while a large number of men are also employed in the Government dockyard.

Military and marine.

The Port Trust, a small board of thirteen members representing commercial and other interests, controls the administration of the port. It had in 1903–4 a revenue of over 64 lakhs and a reserve fund of 27 lakhs. The Trust is responsible for carrying out improvements to the port, and has under contemplation the early addition of a third dock to the existing Victoria and Prince's Docks, which no longer meet the requirements of local shipping. The foundation stone of this, to be called the Alexandra Dock, was laid by His Royal Highness the Prince of Wales in November, 1905.

Port Trust.

A similar board of fourteen members, constituted under the Government of Lord Sandhurst in 1898 and styled the Bombay

City Improvement Trust.

[1] One of these is now quartered at Santa Cruz in Salsette.

City Improvement Trust, has, as already mentioned, been entrusted with the regeneration of the city by the construction of new thoroughfares, the demolition of insanitary areas, the erection of sanitary quarters for the labouring classes, and the development of valuable sites for building. Its chief sources of revenue are an annual contribution from the municipality and the income from valuable property assigned to it by Government.

Land revenue.

There are eight forms of land tenure existing in Bombay: namely, pension and tax, quit and ground rent, *foras*, *toka*, leasehold, land newly assessed, tenancies-at-will, and *inām*. 'Pension and tax,' from the Portuguese *pençao*, represents a fixed payment for fee-simple possession in compromise of a doubtful tenure, and dates from 1674. It is not subject to revision, and is redeemable on payment of thirty years' assessment. 'Quit and ground rent' assessment represents a tax imposed in 1718 to cover the cost of erecting fortifications, and varies from 3 to 5½ pies per square yard. *Foras* lands are held on payment of a *foras* or rent, a term which now refers only to the rent paid on lands given out at a low rate to persons willing to improve them. The tenure dates from 1740, when low-lying land was offered to the public for cultivation at a rent or *foras* of 2 pies per 60 square yards. *Toka* represents a share of the produce of the land, the original payment in kind being subsequently replaced by a money payment, which in 1879–80 was fixed for fifty years. 'Leasehold' land is held for terms varying from 21 to 999 years. 'Newly assessed lands' are rated under Act II of 1876, and the rates may be raised from time to time. The chief holders of *inām* land in the island are the Lowjī family (1783) and the heirs of Jamsetjī Bomanjī (1821). They pay no cess or rent of any kind. The land revenue of Bombay is collected under a special Act (Bombay Act II of 1876, modified by Act III of 1900), and amounted in 1903–4 to 3·7 lakhs. The excise revenue, including tree tax, for the same year was 11·7 lakhs.

Education.

Education was represented in 1880–1 by 146 schools and colleges with a total of 16,413 pupils. In 1900–1 the number of pupils had risen to 40,104. By the close of March, 1904, the city possessed 531 educational institutions of all kinds, as detailed in the table on the next page.

Of these institutions the Grant Medical College, which was established in 1845, prepares students for the degrees of L.M. & S. and M.D., and is the only college of its kind in the Presidency. The Elphinstone College was instituted in

1835 and is under the management of Government. The Bombay Law School, which teaches the full course in Law, is held in the Elphinstone College building. Among other important establishments are the Wilson College, St. Xavier's College, the Sir Jamsetjī Jījībhoy School of Art, the Victoria Jubilee Technical Institute, the Veterinary College, and a school for deaf-mutes. According to the Census of 1901 the number of those who are wholly illiterate amounts to 81 per cent. of the total population.

Class of institutions.	Number.	Number of pupils.		
		Male.	Female.	Total.
Public.				
Arts colleges	3	1,086	29	1,115
Professional colleges	2	1,027	45	1,072
High schools	36	8,495	1,173	9,668
Middle English schools	49	2,687	943	3,630
Primary schools	196	12,785	6,193	18,978
Technical schools	10	1,283	40	1,323
Training schools	2	...	13	13
Total public	298	27,363	8,436	35,799
Private	233	7,912	2,760	10,672
Grand total	531	35,275	11,196	46,471

A vigorous English and vernacular press flourishes in Bombay. The *Times of India* and the *Bombay Gazette*, both of them daily journals, well edited and well informed, represent the Anglo-Indian community; and the *Advocate of India*, an evening paper, is also widely circulated. The *Bombay Samāchār* heads the list of vernacular newspapers, the most important of which are published in Gujarātī. News-papers.

For purposes of health administration the city is divided into 4 divisions of 32 sections, each division being placed in charge of a qualified medical officer subordinate to the Health Officer of the municipality. The municipal hospital for infectious diseases at Arthur Road is supplemented by numerous private plague hospitals where members of the different communities can be treated. Altogether there are 12 hospitals, 17 dispensaries, and 19 private unaided institutions in Bombay, including a European General Hospital and 4 hospitals and 2 dispensaries for women. The expenditure on public medical institutions in 1904 was Rs. 5,25,000; and the annual attendance was 18,304 in-patients and 184,058 out-patients in the public institutions, and 1,355 in-patients and 191,865 out-patients in the 19 private institutions. Be- Medical.

sides these, 3 railway institutions and 4 state special institutions annually treat 26,000 and 15,000 patients respectively. Under Act I of 1877 vaccination is compulsory in Bombay. There are 13 vaccinating stations with 8 vaccinators, and the number of persons vaccinated in 1904 was 19,927.

A leper asylum at Mātunga, established by the efforts of a former Municipal Commissioner, Mr. H. A. Acworth, provides accommodation for 370 inmates at a yearly cost of Rs. 33,000. The lepers are mainly drawn from the neighbouring coast districts, though some come from remote towns in Central Asia. They are employed in cultivating food-crops, assisted by a system of septic sewage tanks, and the asylum is popular among those who are afflicted.

A public lunatic asylum is maintained at Colāba Point for Europeans, Eurasians, and Pārsīs. It had in 1904 an average strength of 136 inmates, costing Rs. 307 per head per annum.

The plague.

On August 21, 1896, a case of genuine bubonic plague was discovered in a house in Māndvi, a densely populated quarter of the native city on the east side of the island. The disease spread rapidly, and by December the mortality of Bombay had attained alarming dimensions. Measures were soon imperatively demanded for checking the epidemic. The control of these measures was entrusted to a special committee of officers appointed by Government and invested with very full powers. Attempts were then made to enforce the segregation of persons who had been in contact with a plague patient, the removal of the patients to some properly equipped hospital, and the disinfection of clothing and premises. These measures were essentially unpopular, and besides adding a stimulus to emigration on a large scale, the population fleeing as much from an unreasoning fear of all forms of control as from terror of the epidemic, eventually led to riots and bloodshed. The position was one of extreme difficulty. The sanitary service of the city was in the hands of *halālkhors* or scavengers. Had these joined the general exodus, the city would in a short time have been rendered uninhabitable. At the same time, the exodus of panic-stricken residents threatened to carry the plague over the whole of the Presidency and even beyond its limits. Attempts were made to enlist the co-operation of the leaders of native communities; gradually calmer feelings began to prevail, and with the subsidence of the epidemic in the hot season, Bombay tended to resume its normal aspect. But in the interval the exodus had been

enormous (it was roughly estimated at one-half of the population), the disease had been spread far and wide by heedless fugitives, business had been brought almost to a standstill, and the weekly mortality had risen to the appalling figure of 1,900. Annually since the fatal year of 1896 plague has become epidemic in the city. The highest rates of mortality reached in any week during the succeeding years were:—

1897-8	2,333
1898-9	2,412
1899-1900	2,772
1900-1	2,632
1901-2	1,902
1902-3	2,613
1903-4	1,676
1904-5	1,789

The usual season of maximum mortality is February or March. Gradually it came to be recognized that the continued existence of the plague, combined with the passive resistance of the people to measures which they failed to approve, rendered drastic expedients both undesirable and inoperative. After the abolition of the plague committee, the Government maintained for several years a specially organized plague administration in Bombay City, charged with the carrying out of moderate measures of disinfection and isolation, as far as possible with the concurrence of the victims. Assistance was given for the evacuation of seriously infected localities by the erection of temporary 'health camps' in various parts of the island. Finally, in 1901, the control of plague measures was handed over once more to the Health department of the municipality, with whom it now rests. The inoculation of healthy persons with Haffkine's preventive serum was carried out on a considerable scale, and with fair success, though the operation, partly owing to the shortness of the period for which it offers protection, and partly owing to prejudice, was never popular.

[*Census Reports for* 1872, 1881, and 1901; Sir J. M. Campbell, *Materials towards a Statistical Account of the Town and Island of Bombay* (Bombay, 1894); S. M. Edwardes, *The Rise of Bombay, a Retrospect* (Bombay, 1902); J. Gerson da Cunha, 'The Origin of Bombay,' extra number, *Journal of the Bombay Branch of the Royal Asiatic Society*, 1900; James Douglas, *Bombay and Western India*, 2 vols. (1893).]

Revenue Account of Bombay Municipality for 1903–4

(In thousands of rupees)

Receipts.

Receipts		
Taxation Proper.		
General tax		29,03
Wheel tax and tolls		3,98
Town duties		11,69
Licences		1,06
Receipts from Government for liquor licences		1,44
Receipts from Government for tobacco duty		2,40
Total		49,60
Services rendered.		
Halālkhor tax		8,11
Water-tax and other miscellaneous water-works revenue		15,71
Total		23,82
Returns from Property and Miscellaneous.		
Market receipts		4,53
Public gardens		11
Tramway rent		50
Contribution from municipal servants towards pension, &c., fund		23
Interest and profit on investments of surplus loan and other balances	1,36	
Interest on the sinking, insurance, worn-out mains renewal, school-building, and net premiums funds investments	2,23	
		3,59
Miscellaneous		2,34
Total		11,30
Grand total		84,72

Expenditure.

Expenditure	
General superintendence	2,34
Assessment and collection and revenue and refund audit departments	2,99
Fire brigade	1,24
Public gardens — maintenance and new works	67
Public works (engineer's) department	15,82
New works	84
Public health department	19,79
Police charges	5,00
Education	1,13
Hospitals	55
Pensions, gratuities, and compassionate allowance	58
Contribution to the City Improvement Trust	3,50
Total	54,45
Municipal debt:—	
Interest and charges on loans	22,43
Reduction of debt and payment of sinking fund, including investment of interest accrued on sinking fund	6,76
Total	29,19
Investments:—	
Municipal buildings insurance fund	5
Interest on the insurance, worn-out mains renewal, school-building, and net premiums fund	28
Total	33
Miscellaneous	23
Investment of the premium on the last instalment of $3\frac{3}{4}$ lakhs of the $24\frac{3}{4}$ lakhs loan	11
Grand total	84,31

NORTHERN DIVISION

Northern Division.—The most northern Division of the Bombay Presidency proper, lying between 18° 53′ and 23° 37′ N. and 71° 19′ and 74° 29′ E., with an area of 13,710 square miles. It comprises the Districts of AHMADĀBĀD, KAIRA, PĀNCH MAHĀLS, BROACH, SURAT, and THĀNA. It is bounded on the north by Rājputāna; on the east by the spurs of the Vindhyas, Sātpurās, and Western Ghāts; on the south by the Central Division and the Kolāba District of the Southern Division; and on the west by Kāthiāwār and the Arabian Sea. The head-quarters of the Commissioner are at Ahmadābād city. It has a population of 3,513,532, of whom 786,089 reside in urban areas. The population, which had increased by 9 per cent. between 1881 and 1891, decreased by 10 per cent. during the next decade owing to the famine of 1899–1900. The Division, though the smallest in the Presidency proper, is the most thickly populated (average density, 256 persons per square mile). In 1901 Hindus numbered 84 per cent. of the total, Musalmāns 9 per cent., Jains 2 per cent., and Christians 2 per cent., while other religions included Sikhs (604), Buddhists (27), Pārsīs (22,543), Jews (609), and Animists (58,230).

The population and revenue of the Division are shown below:—

District.	Area in square miles.	Population, 1901.	Land revenue and cesses, 1903-4, in thousands of rupees.
Ahmadābād . . .	3,816	795,967	16,45
Kaira	1,595	716,332	22,74
Pānch Mahāls . .	1,606	261,020	3,54
Broach	1,467	291,763	23,45
Surat	1,653	637,017	25,49
Thāna	3,573	811,433	16,14
Total	13,710	3,513,532	1,07,81

The first five of these Districts are in Gujarāt and are very fertile. The Division contains 47 towns and 4,950 villages. The largest towns are AHMADĀBĀD (population, 185,889) and SURAT (119,306). Other towns with a population over 20,000

are: BĀNDRA (22,075), BROACH (42,896), GODHRA (20,915), and NADIĀD (31,435). The chief places of commercial importance are Ahmadābād, Surat, and Broach. The KĀNHERI CAVES in Thāna District and the Musalmān buildings at Ahmadābād are of great archaeological and historic interest. DĀKOR in Kaira District is an important place of pilgrimage.

Under the supervision of the Commissioner of the Northern Division are the Political Agencies shown in the following table:—

Agency.	Name of State.	Area in square miles.	Population, 1901.	Gross revenue, 1903-4, in thousands of rupees.
Mahī Kāntha	Idar and 62 smaller States	3,528	361,545	11,41
Pālanpur	Pālanpur, Rādhanpur, and 8 small States	8,000	467,271	13,12
Rewā Kāntha	Bālāsinor, Bāriya, Chota Udaipur, Lūnāvāda, Rājpīpla, Sunth, and 5 minor States and 2 *thāna* circles of 50 *tālukas*	4,980	479,065	21,07
Kaira	Cambay	350	75,225	5,54
Surat	Bānsda, Sachīn, Dharampur, and the Dāngs estate	1,960	179,975	12,43
Thāna	Jawhār	310	47,538	1,73

Boundaries, configuration, and hill and river systems.

Ahmadābād District.—District in the Northern Division of the Bombay Presidency, lying between 21° 26′ and 23° 37′ N. and 71° 19′ and 73° 27′ E., with a total area of 3,816 square miles. It is bounded on the west and south by the peninsula of Kāthiāwār; on the north by the northern division of Baroda territory; on the north-east by Mahī Kāntha territory; on the east by the State of Bālāsinor and the District of Kaira; and on the south-east by the State and Gulf of Cambay. The boundary line is irregular, and two portions, the Parāntīj *taluka* in the north-east and the Gogha *petha* in the south, are cut off from the main body of the District by the territories of native States. The compactness of the District is also broken by several villages belonging to Baroda and Kāthiāwār which lie within it, while several of its own are scattered in small groups beyond its borders.

The general appearance of the District shows that at no very remote period it was covered by the sea. The tract between the head of the Gulf of Cambay and the Rann of Cutch is still subject to overflow at high tides. In the extreme south, and also just beyond the northern boundary, are a few rocky hills. But between these points the whole of the District forms a

level plain, gradually rising towards the north and east, its surface unbroken by any inequality greater than a sandhill.

The chief physical feature is the river SĀBARMATĪ, which rises in the north-east, near the extremity of the Arāvalli range, and flows towards the south-west, falling finally into the Gulf of Cambay. The river has three tributaries, the Khāri, Meshwa, and Mājham, which, with the Shelva and Andhari, all flow south-west. Flowing east from Kāthiāwār are the Bhogāva, Bhādar, Utāvli, Nilki, Pinjaria, and Adhia rivers. The waters of the Khāri are diverted for the irrigation of more than 3,000 acres by canals 16 miles in length. The only large lake in the District is situated in the south of the Viramgām *tāluka*, about 37 miles south-west of Ahmadābād city. This sheet of water, called the NAL, is estimated to cover an area of 49 square miles. Its water, at all times brackish, grows more saline as the dry season advances. The borders of the lake are fringed with reeds and other rank vegetation, affording cover to innumerable wild-fowl. In the bed of the lake are many small islands, much used as grazing grounds during the hot season. In the north of the District, near the town of Parāntīj, in a hollow called the Bokh (lit. a fissure or chasm), are two smaller lakes. Of these, the larger covers an area of about 160 acres, with a depth of 30 feet of sweet water; and the smaller, with an area of 31 acres, is 8 feet deep during the rains and cold season, but occasionally dries up before the close of the hot season. There are several creeks, of which the most important are those of Dholera, Gogha, and Bavliari.

Geology.

The District is occupied mostly by alluvial plains. The superficial covering of alluvium is, however, of no great thickness. The underlying strata probably include Tertiary and Cretaceous sediments, resting on a substratum of gneiss, and possibly slates. The Tertiary beds are probably all miocene, corresponding in age to the Siwāliks, and consist of sandstones or clays, with sometimes rubbly limestone. The underlying strata are probably the sandstones of the Umia group, of neocomian or Lower Cretaceous age. Remnants of Deccan trap and Lameta (Upper Cretaceous) may occasionally intervene between the two formations. The Deccan trap is exposed in the western part of the Dhandhuka *tāluka*. The outlying *mahāl* of Gogha in Kāthiāwār consists of Deccan trap, laterite, and Siwālik beds, the latter forming the island of Piram, renowned for its fossil bones and fossil wood. The saline earth in the west of Viramgām was at one time used for the manufacture of saltpetre.

Botany.

The District as a whole is open and poorly wooded. The chief trees are mango, *rāyan* (*Mimusops hexandra*), *mahuā*, and *nīm* (*Melia Azadirachta*). The Modāsa hills bear inferior teak and bamboo, and also produce the *khair*, *babūl*, *pīpal* (*Ficus religiosa*), *bordi* (*Zizyphus Jujuba*), and *khākra* (*Butea frondosa*). Many of the trees and shrubs supply food, medicines, and materials for dyeing and tanning. Gum from the *khair* and *babūl* is eaten by the poorer classes. The *pīpal* and *bordi* yield a wax much used by goldsmiths for staining ivory rods, and the leaves are eaten by buffaloes. The berries of the *mahuā* are boiled with grain, and the leaves of a creeper called *dori* (*Leptadenia reticulata*) form a favourite article of food with the Bhīls. From the seed of the *mahuā* soap-oil is extracted. Of flowering plants the principal types are *Hibiscus*, *Crotalaria*, *Indigofera*, *Cassia*, and *Ipomoea*.

Fauna.

Tigers are almost extinct. Leopards are found in Modāsa, and wolves in the low-lying salt lands near the Nal. Wild hog are common. Gazelle and barking-deer are also met with. The smaller kinds of game are obtained during the cold season in great numbers, especially quail, duck, and snipe. Fish abound.

Climate and temperature.

Except in the southern tracts lying along the sea-coast, the District, especially towards the north and east, is subject to considerable variations of temperature. Between the months of November and February periods of severe cold occur, lasting generally from two days to a week. During the hot months, from February to June, the heat is severe; and as the rainfall is light, the climate in the rainy season is hot and close. October is the most sickly month. The mean temperature is 81°, the maximum indoors being 115° and the minimum 47°.

Rainfall.

The rainfall varies but slightly between the central portions of the District and the outlying tracts. Dhandhuka and Gogha are the driest. The maximum average rainfall is 34 inches at Modāsa, and the minimum 27 at Dhandhuka. The annual rainfall for the twenty-five years ending 1902 averaged 29 inches. In consequence of the ill-defined channels of the western rivers and the low level of the ground in the lower course of the Sābarmatī, the District suffers periodically from floods, the chief of which were recorded in the years 1714, 1739, 1868, and 1875.

History.

Although Ahmadābād District contains settlements of very high antiquity, its lands are said to have been first brought under tillage by the Anhilvāda kings (A.D. 746–1298). Not-

withstanding the wealth and power of these rulers and the subsequent Muhammadan kings of Gujarāt, large portions of the District remained in the hands of half-independent Bhīl chiefs, who eventually tendered their allegiance to the emperor Akbar (1572) when he added Gujarāt to the Mughal empire. With the exception of Gogha, the present lands of the District were included in the *sarkār* of Ahmadābād, which formed the head-quarters of the Gujarāt *Sūbah*, some outlying portions being held by tributary chieftains; and after the capture of Ahmadābād by the Marāthās (1753) the Peshwā and the Gaikwār found it convenient to continue this distinction between the central and outlying parts. A regular system of management was introduced into the central portion, while the outlying chiefs were called on only to pay a yearly tribute, and, so long as they remained friendly, were left undisturbed. Until their transfer to the British in 1803, the position of the border chieftains remained unchanged, except that their tribute was gradually raised. The first British acquisition in the District was due to the aggression of the Bhaunagar chief, who, intriguing to obtain a footing in Dholera, drove the people to seek British protection. The Bombay Government was implored for years to take possession of Dholera and to protect its inhabitants from aggression. In 1802 the offer was accepted, the cession being sanctioned by the Gaikwār, then predominant in Gujarāt as the Peshwā's deputy. Sir Miguel de Souza was sent to examine and report upon this new possession, and he was of opinion that it would be of little value without the addition of other adjoining estates. These were also ceded, and in 1803 Dholka was handed over to the British for the support of a subsidiary force. The territory thus acquired remained under the Resident at Baroda till 1805, when it was included in the charge of the newly appointed Collector of Kaira. In 1818, in consequence of fresh cessions of territory, including the city of Ahmadābād, resulting from the overthrow of the Peshwā, Ahmadābād was made a separate District.

Archaeology.

The District is rich in Hindu and Musalmān buildings of considerable architectural beauty, most of which are to be found in AHMADĀBĀD CITY and in its immediate vicinity at Sarkhej and Bātwā. There are notable specimens of Musalmān architecture at Dholka and Mandal. A fine temple of Mahādeo, at Bhīmnāth in the Dhandhuka *tāluka*, has a mythical origin connected with the Pāndavas. At Adālaj, 12 miles north of Ahmadābād, is the finest step-well in Gujarāt.

The people.

In 1857 the population of the District was estimated at 650,223. At the last four enumerations it was: (1872) 832,231, (1881) 856,119, (1891) 921,507, and (1901) 795,967, the decrease during the last decade being due to the severe famine of 1900 and to visitations of cholera. The distribution in 1901 was as follows:—

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Viramgām	675	3	156	113,103	168	− 26	10,784
Parāntīj	447	1	120	62,158	194	− 25	4,000
„ Modāsa *petha*		1	46	24,595	194	− 26	1,995
Sānand	361	1	83	63,053	175	− 22	4,670
Daskroi	345	1	137	314,719	912	+ 6	47,372
Dholka	690	1	116	89,780	130	− 24	7,352
Dhandhuka	1,298	3	141	98,685	99	− 21	12,329
„ Gogha *petha*		1	63	29,874	99	− 10	2,243
District total	3,816	12	862	795,967	209	− 14	90,745

Of the total population, 665,762, or 84 per cent., are Hindus, and 87,183, or 11 per cent., Musalmāns, the Christians numbering 3,450. The language chiefly spoken is Gujarātī, but in the towns Hindustāni is generally understood.

The chief towns of the District are: AHMADĀBĀD, VIRAMGĀM, DHOLKA, DHANDHUKA, PARĀNTĪJ, DHOLERA, MODĀSA, and SĀNAND.

Castes and occupations.

Among the Hindus, the merchant (Baniā or Vānī) class is the most influential; but, contrary to the rule in other parts of Gujarāt, the Shrāvak Baniās, or Jain merchants, are wealthier than the Meshri Baniās, or Brāhmanical traders. The richest members of both classes employ their capital locally, supplying the funds by which the village usurers and dealers carry on their business. Those who do not possess sufficient capital to subsist solely by money-lending borrow at moderate rates of interest from their caste-fellows, and deal in cloth, grain, timber, or sugar. The poorest of all keep small retail shops, or move from place to place hawking articles required by the rural population for their daily consumption. Shrāvaks and Meshri Baniās are also employed as clerks in Government or private offices.

Although Ahmadābād is one of the first manufacturing Districts of the Presidency, the large majority of the people support themselves by agriculture. Among the Hindus, the

chief cultivating classes are the Kunbīs, Rājputs, and Kolīs. There is also in most parts of the District, a sprinkling of Musalmān cultivators or Bohrās, as well as Musalmāns of the common type. The Kunbīs, who number 101,000, are an important class, many of them being skilled weavers and artisans, while some have risen to high positions in Government service, or have acquired wealth in trade; but the majority are engaged in agriculture and form the greater part of the peasant proprietors in Gujarāt. There is no real difference of caste between Kunbīs and Pātidārs, though Pātidārs will not now intermarry with ordinary Kunbīs. The latter are divided into three classes—Levās, Kadvas, and Anjanas. Female infanticide, owing to the ruinous expenses attached to marriage, having been found prevalent among the Kunbīs, the provisions of Bombay Act VIII of 1870 were applied to the Kadva and Levā Kunbīs. Two of the marriage customs of the Kadva Kunbīs are deserving of notice. When a suitable match cannot be found, a girl is sometimes formally married to a bunch of flowers, which is afterwards thrown into a well. The girl is then considered a widow, and can now be married by the *nātrā* (second marriage) form—a cheap process. At other times a girl is given to a man already married, his promise to divorce her as soon as the ceremony is completed having previously been obtained. The girl is afterwards given in *nātrā* to any one who may wish to marry her. Next in position to the Kunbīs are the Rājputs, who still retain to some extent the look and feelings of soldiers. They are divided into two classes: Girāsiās, or landowners, and cultivators. The former live a life of idleness on the rent of their lands, and are greatly given to the use of opium. There is nothing in the dress or habits of the cultivating Rājputs to distinguish them from Kunbīs, though they are far inferior in skill and less industrious. Their women, unlike those of the Girāsiās, are not confined to the house, but help their husbands in field labour. The character of the Kolīs, as agriculturists, varies much in different parts of the District. In the central villages their fields can hardly be distinguished from those cultivated by Kunbīs, while towards the frontier they are little superior to those of the aboriginal tribes. Crimes of violence are occasionally committed among them; but, as a class, they have settled down in the position of peaceful husbandmen—a marked contrast to their lawless practices of fifty years ago. After Kunbīs, the chief castes of the District are Brāhmans, 43,000; Rājputs, 23,000 (excluding Girāsiās, 19,000); Vānīs

or Baniās, 29,000; Kolīs, 188,000; and Dhers, 44,000. Mochīs (leather-workers) and Kumbhārs (potters) are also numerous. Jains, mainly Srīmālis, exceed 37,000. The Musalmāns are chiefly Sunnis.

Christian missions.

There are 3,450 Christians, and missions are numerous in the District. The Irish Presbyterians have stations near Ahmadābād, Parāntīj, and Gogha, dating from 1861, 1897, and 1844. The Methodist Episcopalians and the Salvation Army are also at work, and there is a mission known as the Hope and Live Mission. The Salvation Army supports two industrial schools, one for girls at Ahmadābād and another at Daskroi, and a training home for women with 100 inmates. In Daskroi it maintains a farm of 400 acres, on which 27 families are settled. Dholka and Sānand are stations of the American Christian Missionary Alliance, which has made 640 converts and maintains an orphanage with 600 inmates at the former place. Of the 2,800 native Christians, 500 belong to the Anglican communion, 500 are Presbyterians, and 460 Roman Catholics. A remarkable increase in converts, namely 1,078, was noticed between 1891 and 1901.

General agricultural conditions.

The two principal varieties of soil are black and light. In many parts of the District both occur within the limits of a single village, but on the whole the black soil is found chiefly towards the west, and the light-coloured soil in the east. With the help of water and manure the light soil is very fertile; and though during the dry season it wears into a loose fine sand, after rain has fallen it again becomes tolerably compact and hard. Two other varieties of soil are less generally distributed: an alluvial deposit of the Sābarmatī river, the most fertile soil in the District, easily irrigated, and holding water at the depth of a few feet below the surface; and, in the north-east, a red stony soil, like that of Belgaum in the south of the Presidency.

Chief agricultural statistics.

The tenures of the District are chiefly *tālukdāri* or *ryotwāri*, which form respectively 50 per cent. and 32 per cent. of the total area. About 6 per cent. is held as *inām* or *jāgīr* land. The chief statistics of cultivation in 1903–4 are shown in the table on the next page, in square miles.

The chief crops are: wheat, covering 228 square miles; *jowār*, 380; *bājra*, 228; cotton, 480. The best rice is grown in Daskroi, and the next best in Sānand and Dholka. The cotton, which has a good staple, is mainly grown in the Dhandhuka and Dholka *tālukas*. In Daskroi and Dholka many garden crops are cultivated.

Tāluka.	Total.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Viramgām	675	472	5	30	...
Parāntīj	447	251	8	89	20
Sānand	361	285	13	30	...
Daskroi	345	236	20	33	...
Dholka	690	498	16	40	...
Dhandhuka	1,298	721	6	8	...
Total	3,816	2,463	68	230	20

* The area for which statistics are not available is 391 square miles.

The *tālukdārs* and *mehwāsi* chiefs, who hold about half the lands of the District, are deeply in debt. In consequence, the extension and improvement of agriculture are much neglected. During the decade ending 1903–4, 32·3 lakhs was advanced to agriculturists for improvements and the purchase of seed and cattle, of which 10½ lakhs was lent in 1899–1900 and 11·7 lakhs in 1900–1. Improvements in agricultural practice.

The local cattle are usually under-sized and weakly, but in Dhandhuka the cows are exceptionally good milkers, yielding as much as 16 pints a day. Bullocks of the Kāthiāwār and Kānkrej breeds are owned by cultivators in Daskroi, Dholka, and Dhandhuka. Ahmadābād is one of the best pony-breeding Districts in the Presidency. Four stallions are maintained by the Civil Veterinary department; and active, hardy ponies are also bred by Kābuli merchants from Kāthiāwār, Kābuli, Sindī, and Arab stock. Camels are reared by Rabāris, Rājputs, and Sindīs in Daskroi, Viramgām, and Dhandhuka. Cattle, ponies, and camels.

The District is not favourable for direct river irrigation, as most of the rivers flow in deep narrow channels with sandy beds. At the same time there are many spots along the course of the Sābarmatī, Khāri, and Bhādar where, by means of a frame on the banks, water can be raised in leathern bags. Well-water is also used to a considerable extent. Irrigation from tanks and reservoirs is almost confined to the early part of the cold season, when water is required to bring the rice crops to maturity. In 1903–4, 68 square miles were irrigated, of which 50 square miles were supplied by wells, 7 by tanks, 5 by Government works, and 6 from other sources. The Government irrigation works in the District are the Hāthmati canal and the Khari cut, commanding respectively 29,000 and 11,500 acres, with a capital expenditure up to 1903–4 of 5 and 6 lakhs respectively. In all parts of the District, except in the west where the water is so salt as to be unfit even for purposes of cultivation, wells exist in abundance, and in most Irrigation.

places good water is found at a depth of about 25 feet. The District is also well supplied with reservoirs and tanks for storing water, not only near towns and villages, but in outlying parts; these cover an area of about 14,000 acres. Though in favourable years a sufficient supply of water is thus maintained, after a season of deficient rainfall many of the tanks dry up, causing much hardship and loss of cattle. In 1903-4 there were 18,706 wells, of which 15,763 were used for irrigation. About 170 tanks have been excavated by famine labour. There is little forest in the District, the land so classed being fodder and pasture reserves.

Minerals.

The mineral products are veined agate and limestone. Iron-ore seems to have once been worked in Gogha. Portions of Dholera and Viramgām contain earth suitable for the production of saltpetre.

Arts and manufactures.

Ahmadābād holds an important place as a manufacturing District. Except the preparation of salt, carried on near the Rann, most of its manufactures centre in Ahmadābād city. At Khāraghoda, about 56 miles north-west of Ahmadābād, are situated two salt-works, from which salt is distributed through Gujarāt. A railway has been carried into the heart of the works, and a large store has been built at Khāraghoda. Minor dépôts have been constructed at Ahmadābād, Broach, and Surat. Other stations on the railway are supplied by a contractor. The salt is made from brine found at a depth of from 18 to 30 feet below the surface. This brine is much more concentrated than sea-water, and contains in proportion about six times as much salt. Saltpetre was once largely manufactured in the neighbourhood of the salt-works. The other manufactures are cotton cloth, silk, gold- and silver-work, hardware, copper- and brassware, pottery, woodwork, shoes, and blankets. The artisans of Ahmadābād city have enjoyed a high reputation for the skill and delicacy of their handiwork since the days of the Gujarāt Sultāns. Though in 1881 the number of mills was only 4, in 1904 there were 38 steam cotton-mills, with 632,630 spindles and 7,855 looms, producing 45 million pounds of yarn and 28 million pounds of cloth. They employ 24,048 hands. There are also dye-works, a metal factory, a match factory, and an oil-mill. Ahmadābād city is at present second only to Bombay as a centre of the manufacture of cotton yarn and cloth.

Trade guilds.

In consequence of the importance of its manufactures of silk and cotton, the system of caste or trade unions is more fully developed in Ahmadābād than in any other part of

Gujarāt. Each of the different castes of traders, manufacturers, and artisans forms its own trade guild, to which all heads of households belong. Every member has a right to vote, and decisions are passed by a majority. In cases where one industry has many distinct branches, there are several guilds. Thus among potters, the makers of bricks, of tiles, and of earthen jars are for trade purposes distinct; and in the great weaving trade, those who prepare the different articles of silk and cotton form distinct associations. The objects of the guilds are to regulate competition among the members, e.g. by prescribing days or hours during which work shall not be done. The decisions of the guilds are enforced by fines. If the offender refuses to pay, and the members of the guild all belong to one caste, the offender is put out of caste. If the guild contains men of different castes, the guild uses its influence with other guilds to prevent the recusant member from getting work. Besides the amount received from fines, the different guilds draw an income by levying fees on any person beginning to practise his craft. This custom prevails in the cloth and other industries, but no fee is paid by potters, carpenters, and other inferior artisans. An exception is also made in the case of a son succeeding his father, when nothing has to be paid. In other cases the amount varies, in proportion to the importance of the trade, from Rs. 50 to Rs. 500. The revenue derived from these fees, and from fines, is expended in feasts to the members of the guild, and in charity. Charitable institutions, or *sadāvart*, where beggars are fed daily, are maintained in Ahmadābād at the expense of the trade guilds.

Commerce.

From A.D. 746 to the close of the sixteenth century Ahmadābād was a great trading centre. With the rise of Surat it suffered a temporary decline, but under British rule its predominance has been regained. The imports comprise sugar, piece-goods, timber, metal, grain, coco-nuts, and molasses; the exports are cotton, oilseeds, and grain. The trade is carried on both by coasting vessels and by rail, and is chiefly directed to Bombay through the ports of Dholera and Gogha.

Communications. Railways and roads.

Before the introduction of railways, the main trade of Central India and Mālwā passed through Ahmadābād, the chief articles being grain, *ghī*, molasses, tobacco, cochineal, iron and copper, silk and cotton, and cloth. The general means of transit included carts drawn by two or more pairs of bullocks, camels, and pack-bullocks. Fifty years ago there were no made roads in the District; and during heavy rains the

country became impassable to carts, and traffic was suspended. At present the means of communication are three—by road, by rail, and by sea. Since 1870 many good roads have been constructed; and for internal communication, the common Gujarāt cart drawn by two and sometimes four bullocks is still in use. In 1903-4 there were 124 miles of metalled roads and 337 miles of roads suitable for fair-weather traffic only. Of the former, 37 miles of Provincial roads and 66 miles of Local roads are maintained by the Public Works department. The remainder are in charge of the local authorities. Avenues of trees are planted along 285 miles of roads. The Bombay, Baroda, and Central India Railway runs through the District for a distance of 86 miles; the Rājputāna-Mālwā State Railway for 7 miles; the Dhola-Wadhwān branch of the Bhavnagar-Gondal-Junāgadh-Porbandar Railway for about 14 miles; and the Mehsāna-Viramgām branch of the Gaikwār's Mehsāna Railway for about 27 miles. Branch metre-gauge lines connect Ahmadābād city with Parāntīj and Dholka, each traversing the District for 34 miles.

Famine and natural calamities.

During the past two centuries and a half, seventeen years have been memorable for natural calamities. Of these, three were in the seventeenth, seven in the eighteenth, and seven in the nineteenth century. The year 1629 is said to have been a season of great famine; and 1650 and 1686 were years of drought and scarcity. The years 1714 and 1739 were marked by disastrous floods in the Sābarmatī; 1718 and 1747 were years of scarcity, and 1771 was one of pestilence. In 1755 extraordinarily heavy rains did considerable damage to the city of Ahmadābād. The famine which reached its height in 1790-1, and, from having occurred in *Samvat* 1847, is known by the name *sudtālā*, lasted through several seasons. In the nineteenth century the years 1812-3 were marked by the ravages of locusts, while 1819-20 and 1824-5 were years of insufficient rainfall. In 1834 the rainfall was again short, and the distress was increased by vast swarms of locusts. In 1838 there was a failure of the usual supply of rain. In 1868 a disastrous flood of the Sābarmatī occurred. In 1875 the city of Ahmadābād and the three eastern *tālukas* were visited by extraordinary floods of the Sābarmatī; two iron bridges and a large portion of the town were washed away, and throughout the District 101 villages suffered severely.

In 1899-1900 the rains failed and the District was visited by severe famine. Relief works were opened in September, 1899, and continued till October, 1902, the highest daily average

relieved on works being 147,539 (April, 1900), and on gratuitous relief, 98,274 (September, 1900). The maximum death-rate was 100 per 1,000, and the population in the ten years between 1891 and 1901 decreased by 14 per cent. The cost of relief measures in the District during the famine exceeded 78 lakhs, and 24 lakhs of land revenue was remitted. There was very great mortality in agricultural stock, which is estimated to have decreased by two-thirds. The September rains of 1900 failed, and the distress was prolonged into 1901. The crops of the succeeding year promised well, but were destroyed by rats and locusts. Relief measures were again necessary, therefore, in 1901–2, and were not finally closed until seasonable rain fell in August and September of 1902.

District subdivisions and staff.

For administrative purposes Ahmadābād is divided into six *tālukas*: namely, Daskroi, Sānand, Viramgām, Dholka, Dhandhuka, and Parāntīj. Gogha is included in the Dhandhuka *tāluka*, and Modāsa in the Parāntīj *tāluka*. The supervision of these charges is distributed, under the Collector, between two covenanted Assistants and a Deputy-Collector.

Civil and criminal justice.

There is a District and Sessions Judge, whose jurisdiction extends also over the adjacent District of Kaira, and who is assisted by a Joint Judge, an Assistant Judge, a Judge of Small Causes, and five Subordinate Judges. The city of Ahmadābād forms a separate magisterial charge, under a city magistrate. The principal revenue officers are also magistrates. The commonest offences are thefts of ripening grain in the harvest season, and housebreaking. Serious crimes of violence are rare.

Land revenue administration.

As compared with the other British Districts of Gujarāt, an important peculiarity of Ahmadābād is the great extent of land held by the class of large landholders called *tālukdārs* and *mehwāsi* chiefs, who own more than half of the District. Their possessions comprise the border-land between Gujarāt proper and the peninsula of Kāthiāwār. Historically, this tract forms 'the coast, where the débris of the old Rājput principalities of that peninsula was worn and beaten by the successive waves of Musalmān and Marāthā invasion.' But these estates are part of Kāthiāwār rather than of Gujarāt. Their proprietors are Kāthiāwār chiefs, and their communities have the same character as the smaller States of that peninsula. The *tālukdāri* villages are held by both Hindus and Musalmāns. Among the Hindus are the representatives of several distinct classes. The Chudāsamās are descended from the Hindu dynasty of Junāgarh in Kāthiāwār, subverted by the Musalmān

Sultāns of Ahmadābād at the end of the fifteenth century; the Vāghelas are a remnant of the Solanki race, who fled from Anhilvāda when that kingdom was destroyed by Alā-ud-dīn in 1298; the Gohels emigrated from Mārwār many centuries ago; the Jhālas, akin to the Vāghelas, were first known as Makwānas; the Thākardās are the offspring of Solanki and Makwāna families, who lost status by intermarriage with the Kolīs of Mahī Kāntha. The Musalmān families are for the most part relics of the old nobles of Ahmadābād. Besides these, a few estates are still held by descendants of favourites of the Mughal or Marāthā rulers; by Molesalāms, converted Rājputs of the Paramāra tribe, who came from Sind about 1450; and by the representatives of Musalmān officers from Delhi who obtained lands for service done to the Marāthās. All Paramāras and Musalmāns are called Kasbātis, or men of the *kasba* or chief town, as opposed to the rural chiefs. There are also other Kasbātis who say that they came from Khorāsān to Pātan, and received a gift of villages from the Vāghela kings.

The *tālukdārs* are absolute proprietors of their estates subject to the payment of the *jama* or Government demand, which is fixed for a term of years and is subject to revision at the expiry of the term. They cannot, however, permanently alienate any portion without the sanction of Government. In the course of time the estates have become so subdivided that in most villages there are several shareholders jointly responsible for the payment of the whole quit-rent. Under the shareholders are tenants who pay to the landlord a share in the crops, varying from 60 to 50 per cent. In 1862 special measures were adopted for the relief of many of the *tālukdārs* who were sunk in debt. As many as 469 estates were taken under the management of Government, and a survey was undertaken and completed in 1865-6, with the view of ascertaining the area and resources of the different villages. The indebtedness of many of these landowners led to the appointment of a special *tālukdāri* settlement officer, who is responsible for the administration of the encumbered estates.

The original survey of the District in 1856-7 settled the land revenue at 8·7 lakhs. In 1893 a revised survey, which had been commenced in 1888, raised the total demand by 2½ lakhs. The present assessment per acre of 'dry' land averages Rs. 1-13 (maximum Rs. 4-8, minimum Rs. 1-2); of rice land, Rs. 5-2 (maximum Rs. 6, minimum R. 1); and of garden land, Rs. 8-4 (maximum scale Rs. 8, minimum Rs. 5).

Collections of land revenue and of revenue from all sources are shown in the following table, in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	21,02	21,39	9,85	23,69
Total revenue . .	25,84	60,65	52,54	67,34

Municipalities and local boards.

The first municipalities established in the District were Gogha and Parāntīj (1855). In the next five years Dholka, Ahmadābād, Viramgām, Modāsa, and Dhandhuka were made municipal towns. The total revenue of the municipalities averages about 6 lakhs. There are a District board and six *tāluka* boards, with an income in 1903-4 of 2·4 lakhs, chiefly derived from the land cess. The expenditure amounted to 2·2 lakhs, including Rs. 95,000 spent on roads, buildings, and water-works.

Police and jails.

The District Superintendent controls the police of the District, with the aid of two assistants. There are 18 police stations and 33 outposts. The force in 1904 numbered 1,170 men, inclusive of 248 head constables, under 3 inspectors and 15 chief constables, being one to every 3 square miles or nearly 2 per 1,000 of the population. There is also a body of 26 mounted police, under 2 *daffadārs* and 2 European constables. A Central jail at Ahmadābād city has accommodation for 929 prisoners, and 8 subsidiary jails and 15 lock-ups are distributed throughout the District. The daily average number of prisoners in 1904 was 974, of whom 47 were females.

Education.

Ahmadābād stands third among the Districts of the Presidency as regards the literacy of its population, of whom 11·4 per cent. (20·5 males and 1·7 females) were able to read and write in 1901. The number of schools increased from 193 with 14,638 pupils in 1880-1 to 380 with 30,014 pupils in 1900-1. In 1903-4 there were 401 schools with 31,460 pupils, including 56 schools for girls with 4,872 pupils. Of the 323 institutions classed as public, 8 are Government, 61 are controlled by municipalities, 197 by local boards, 42 are aided from public funds, and 15 are unaided. These include one Arts college, 6 high schools, 18 middle, 294 primary, 2 training schools, one medical school, and one commercial institution. AHMADĀBĀD CITY contains the Arts college, training colleges for male and female teachers, and a special school for the sons of Gujarāt *tālukdārs*. The total cost of education is about

$3\frac{1}{2}$ lakhs, and the receipts from fees Rs. 70,000. Of the total expenditure, 53 per cent. is devoted to primary education.

Hospitals and dispensaries. Besides 5 private dispensaries, the District contains 3 hospitals (including a leper hospital) and 18 dispensaries, at which 184,000 cases were treated in 1904, of whom 4,364 were in-patients. The expenditure was Rs. 55,500, of which Rs. 17,000 was met from Local and municipal funds. A lunatic asylum at Ahmadābād city, opened in 1863, has accommodation for about 108 inmates.

Vaccination. The number of persons successfully vaccinated in 1903–4 was 19,000, representing a proportion of 24 per 1,000, which is slightly below the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. iv (1879).]

Viramgām Tāluka.—North-western *tāluka* of Ahmadābād District, Bombay, lying between 22° 48′ and 23° 37′ N. and 71° 42′ and 72° 18′ E., with an area of 675 square miles. The population in 1901 was 113,103, compared with 152,022 in 1891, the decrease being due to famine. The density, 168 persons per square mile, is less than the District average. It contains three towns, VIRAMGĀM (population, 18,952), the head-quarters, MANDAL (5,091), and PĀTRI (5,544); and 156 villages. Land revenue and cesses in 1903–4 amounted to 2·3 lakhs. Except in the north, where the surface is broken by rolling sandhills, with patches of brushwood, Viramgām is a plain of thinly wooded light soil in the east, and of open black soil to the west and south, ending in the salt level of the Rann of Cutch. More than half of the total area is occupied by alienated and *tālukdāri* villages. The sandy tract in the north is inhabited by Kolīs, who dislike regular work, though they have long ceased to be turbulent.

Parāntīj Tāluka. — *Tāluka* of Ahmadābād District, Bombay, including the *petha* (petty subdivision) of Modāsa, situated in the extreme north-east of the District, and completely surrounded by Native States. It lies between 23° 3′ and 23° 36′ N. and 72° 44′ and 73° 27′ E., with an area of 447 square miles, and contains one town, PARĀNTĪJ (population, 8,175), the head-quarters, and 120 villages in the *tāluka* proper, and one town, MODĀSA (7,267), and 46 villages in the petty subdivision. The population in 1901 was 86,753, compared with 116,140 in 1891, the decrease being due to famine. The density, 194 persons per square mile, is slightly below the District average. Land revenue and cesses in 1903–4 amounted to 1·4 lakhs. From the north-east, lines of rocky bare hills gradually sink west and south into a plain, at first

thinly wooded and poorly tilled, then with deeper soil, finer trees, and better tillage, till in the extreme west along the banks of the Sābarmatī the surface is broken by ravines and ridges. In the east the staple crop is maize, and in the west millet. Garden cultivation is neglected. Water is abundant. The *tāluka* is the healthiest and coolest part of the District. The rainfall is more certain than elsewhere, but the residents are extremely poor.

Sānand Tāluka.—Central *tāluka* of Ahmadābād District, Bombay, lying between 22° 47′ and 23° 7′ N. and 72° 5′ and 72° 32′ E., with an area of 361 square miles. It contains one town, SĀNAND (population, 6,783), the head-quarters; and 83 villages. The population in 1901 was 63,053, compared with 81,363 in 1891. The density, 175 persons per square mile, is less than the District average. Land revenue and cesses in 1903–4 exceeded 2 lakhs. Except for an undulating strip of land on the west, Sānand forms the centre of a rich plain of light soil with well-wooded fields; in the south and west is a bare stretch of black soil.

Daskroi Tāluka.—Head-quarters *tāluka* of Ahmadābād District, Bombay, lying between 22° 48′ and 23° 15′ N. and 72° 28′ and 72° 50′ E., with an area of 345 square miles. The population in 1901 was 314,719, compared with 295,987 in 1891. The *tāluka* contains one town, AHMADĀBĀD (population, 185,889), the head-quarters; and 137 villages. Owing to the presence of the city, the density of population, 912 persons per square mile, is much higher than elsewhere. Land revenue and cesses amounted in 1903–4 to nearly 4·4 lakhs. The entire *tāluka*, except for a few gentle undulations in the east and south, is a uniform plain. It is crossed by the Sābarmatī, Khāri, and Meshvar rivers, but only in the extreme south are their waters used for irrigation. The soil is light, and varies from dry sand to rich loam. With good tillage and watering, the sandiest fields yield a large return to the husbandman. In the loops of land enclosed by the Sābarmatī, patches of alluvial soil produce the finest sugar-cane and tobacco. The climate is hot and dry, and the rainfall averages 28 inches.

Dholka Tāluka.—Central *tāluka* of Ahmadābād District, Bombay, lying between 22° 24′ and 22° 52′ N. and 72° 1′ and 72° 23′ E., with an area of 690 square miles. It contains one town, DHOLKA (population, 14,971), the head-quarters; and 116 villages. The population in 1901 was 89,780, compared with 118,032 in 1891, the decrease being due to famine. The density, 130 persons per square mile, is much below the Dis-

trict average. Land revenue and cesses in 1903–4 amounted to 3·2 lakhs. The *tāluka* is a plain sloping south-west to the Little Rann. In the east, along the Sābarmatī, the fields are hedged and the land is thickly planted with fruit trees. The south-west is a bleak country exposed to the biting winds of the cold season. The only river is the Sābarmatī. The annual rainfall averages 34 inches.

Dhandhuka Tāluka.—Southern *tāluka* of Ahmadābād District, Bombay, including the petty subdivision of Gogha, lying between 21° 26′ and 22° 33′ N. and 71° 19′ and 72° 23′ E., with an area of 1,298 square miles. There are 3 towns, DHANDHUKA (population, 10,314), the head-quarters, DHOLERA (7,356), and RĀNPUR (6,423), in the *tāluka* proper, and one, GOGHA (4,798), in the outlying petty subdivision, with 204 villages in both. The population in 1901 was 128,559, compared with 157,963 in 1891, the decrease being due to famine. This is the most thinly populated *tāluka*, with a density of only 99 persons per square mile. Land revenue and cesses in 1903–4 amounted to nearly 3·1 lakhs. The surface of the *tāluka* is an open, treeless, black-soil plain, sloping gently towards the Gulf of Cambay. In the west is a tract of bare hills and rough valleys, with millet-fields and garden patches. Cotton is grown in the centre and wheat in the east. The water-supply is scanty. There are no large rivers, and the streams of the Bhādar and the Utāvli lose themselves in marshes. Wells are few and irrigation limited. The climate is trying, except in the cold season. Rainfall varies from 18 to 58 inches.

Ahmadābād City.—Chief city in the District of the same name, Bombay, situated in 23° 2′ N. and 72° 35′ E., 310 miles by rail from Bombay, and about 50 miles north of the head of the Gulf of Cambay. Ahmadābād possesses a station on the Bombay, Baroda, and Central India Railway, and is the junction between that line and the Rājputāna-Mālwā Railway, the metre-gauge line to Delhi. It is also the starting-point of the recently constructed feeder-lines to Parāntīj and Dholka, the former being the pioneer enterprise in railway construction with rupee capital in Western India.

Population.

In the days of its prosperity the city is said to have contained a population of about 900,000 souls; and so great was its wealth that some of the traders and merchants were believed to have fortunes of not less than a million sterling. During the disorders of the latter part of the eighteenth century, Ahmadābād suffered severely, and in 1818, when it came under British rule, was greatly depopulated. In 1851 it con-

tained a population of 97,048, in 1872 of 119,672, in 1881 of 127,621, and in 1891 of 148,412. The city is now the second largest in the Presidency, and has (1901) a population of 185,889, including 4,115 in the cantonments. The Hindus, numbering 129,505, or 70 per cent. of the total, form the wealthiest and most influential class. The Jains, of whom there are 15,460, come next in the order of importance, being the wealthy traders, merchants, and money-lenders of the city. The Kunbī caste supplies a large proportion of the weavers and other artisans. Though the majority of Musalmāns, who number 38,159, seek employment as weavers, labourers, and peons, there are a few wealthy families who trade in silk and piece-goods. Christians number 1,264. Ahmadābād is the head-quarters of the Gujarāt Jain sect, who have upwards of 120 temples here. While in and around the city there is no place deemed holy enough to draw worshippers from any great distance, no less than twenty-four fairs are held, and every third year the Hindu ceremony of walking round the city bare-footed is observed.

History.

Ahmadābād ranks first among the cities of Gujarāt, and is one of the most picturesque and artistic in the Bombay Presidency. The name of the present city is derived from its founder, Ahmad Shāh, Sultān of GUJARĀT (1411–43); but before that date a city named Ashāval existed on the same site, attributed to Rājā Karan, a Solanki Rājput of Anhilvāda. It stands on the raised left bank of the Sābarmatī river, about 173 feet above sea-level. The walls of the city stretch east and west for rather more than a mile, enclosing an area of about 2 square miles. They are from 15 to 20 feet in height, with fourteen gates, and at almost every 50 yards a bastion and tower. The bed of the river is from 500 to 600 yards broad; but, except during occasional freshes, the width of the stream is not more than 100 yards. To the north of the city the channel keeps close to the right bank; and then, crossing through the broad expanse of loose sand, the stream flows close under the walls, immediately above their south-western extremity. Ahmadābād is built on a plain of light alluvial soil or *gorāt*, the surface within the circuit of the walls nowhere rising more than 30 feet above the fair-weather level of the river. From its position, therefore, the city is liable to inundation. In 1875 the floods rose above the level of a large portion, causing damage to 3,887 houses, estimated at about 5 lakhs. Beyond the city walls the country is well wooded, the fields fertile and enclosed by hedges. The surface of the ground is

broken at intervals by the remains of the old Hindu suburbs, ruined mosques, and Musalmān tombs. The walls of the city, built by Ahmad Shāh, were put into thorough repair in 1486 by the greatest of his successors, Mahmūd Shāh Begarà (1459–1511), and in 1832 were again restored under the British Government. In 1572 Ahmadābād was, with the rest of Gujarāt, subjugated by Akbar. The emperor Jahāngīr spent some time here. During the sixteenth and seventeenth centuries Ahmadābād was one of the most splendid cities of Western India. There were, according to Firishta, 360 different wards, each surrounded by a wall. The decay of the Mughal empire led to disastrous changes. Early in the eighteenth century the authority of the court of Delhi in Gujarāt had become merely nominal; and various leaders, Musalmān and Marāthā, contended for the possession of Ahmadābād. In 1738 the city fell into the hands of two of these combatants, Dāmājī Gaikwār and Momin Khān, who, though of different creeds, had united their armies for the promotion of their personal interests, and now exercised an equal share of authority, dividing the revenues between them. The Marāthā chief having subsequently been imprisoned by the Peshwā, the agent of his Mughal partner took advantage of his absence to usurp the whole power of the city, but permitted Dāmājī's collector to realize his master's pecuniary claims. Dāmājī, on obtaining his liberty, joined his forces with those of Raghunāth Rao, who was engaged in an expedition for establishing the Peshwā's claims in Gujarāt. In the troubles that followed, the combined Marāthā armies gained possession of Ahmadābād in 1753. The city was subsequently recaptured by Momin Khān II in 1755–6, but finally acquired by the Marāthās in 1757. In 1780 it was stormed by a British force under General Goddard. The place was, however, restored to the Marāthās, with whom it remained till 1818, when, on the overthrow of the Peshwā's power, it reverted to the British Government.

Architecture and principal remains.

The architecture of Ahmadābād illustrates in a very interesting manner the result of the contact of Saracenic with Hindu forms. The vigorous aggressiveness of Islām here found itself confronted by strongly vital Jain types, and submitted to a compromise in which the latter predominate. Even the mosques are Hindu or Jain in their details, with a Saracenic arch thrown in occasionally, not from any constructive want, but as a symbol of Islām. The exquisite open tracery of some of the windows and screens supplies evidence—

which no one who has seen can forget—of the wonderful plasticity of stone in Indian hands.

'The Muhammadans,' says Mr. James Fergusson, 'had here forced themselves upon the most civilized and the most essentially building race at that time in India; and the Chālukyas conquered their conquerors, and forced them to adopt forms and ornaments which were superior to any the invaders knew or could have introduced. The result is a style which combines all the elegance and finish of Jain or Chālukyan art with a certain largeness of conception, which the Hindu never quite attained, but which is characteristic of the people who at this time were subjecting all India to their sway.'

The following list gives the remains of most interest in the city and its neighbourhood:—

i. *Mosques.*—(1) Ahmad Shāh; (2) Haibat Khān; (3) Saiyid Alam; (4) Mālik Alam; (5) Rānī Asni (otherwise called Sīpri, a corruption of Shehepari); (6) Sīdī Saiyid; (7) Kutb Shāh; (8) Saiyid Usmāni; (9) Miān Khān Chishti; (10) Sīdī Basīr; (11) Muhāfiz Khān; (12) Achhut Bībī; (13) Dastūr Khān; (14) Muhammad Ghaus and the Queen's and the Jāma mosques. The Jāma Masjid, finished in 1424 by Sultān Ahmad, is one of the most remarkable buildings of its class in India. It displays a skilful combination of Hindu and Muhammadan elements of architecture, and the broad courtyard, paved with marble and flanked by five domes, presents an imposing appearance.

ii. *Tombs.*—(1) Ahmad Shāh I; (2) Ahmad Shāh's queen; (3) Daryā Khān; (4) Azam Khān; (5) Mīr Abū; and (6) Shāh Wazīr-ud-dīn.

iii. *Miscellaneous.*—Ancient well of Mātā-Bhawāni at Asārva; the Tīn Darwāzā or 'Triple gateway'; the Kānkariā tank, about a mile to the south-east of the city; Harir's well; the Shāhi Bāgh; Azīm Khān's palace; tombs of the Dutch, and the temples of Swāmi Nārāyan Hāthisingh and Sāntidās; the Chandola and Malik Shabān tanks.

iv. *Mausoleums in the neighbourhood.*—(1) Sarkhej, about 5 miles from Ahmadābād; (2) Bātwā, about 6 miles from Ahmadābād; and (3) Shāh Alam's buildings, situated half-way between Ahmadābād and Bātwā.

The peculiarity of the houses of Ahmadābād is that they are generally built in blocks or *pols*, varying in size from small courts of from five to ten houses to large quarters of the city containing as many as 10,000 inhabitants. The larger blocks are generally crossed by one main street with a gate at each Dwelling-houses.

end, and are subdivided into smaller courts and blocks, each with its separate gate branching off from either side of the chief thoroughfare.

Municipality. The Ahmadābād municipality was established in 1857. It includes the two square miles of territory within the city walls and the railway suburbs outside, as well as the hamlet of Saraspur. Before the constitution of the municipality, a fund raised in 1830 and styled the 'town wall fund' was available for municipal purposes. In 1903-4 the total income of the municipality (including loans) was nearly 10½ lakhs. The chief sources were octroi (Rs. 1,60,000), house and land tax (Rs. 42,000), water rate (Rs. 88,000), and conservancy (Rs. 51,000). The total expenditure was Rs. 11,02,000, including administration (Rs. 54,000), public safety (Rs. 18,000), water-supply (Rs. 29,000), and conservancy (Rs. 1,06,000). In 1890 an attempt was made to drain one of the more thickly populated quarters on the gravitation system. After a comprehensive scheme had been prepared by a European expert, the operations were gradually extended to about half the urban area, at a cost of 14 lakhs. The annual maintenance charges for the 28 miles of drains completed by 1906 exceeds Rs. 14,000, and are met by a drainage rate. A sewage farm of 353 acres is worked at a profit in connexion with the scheme. Prior to 1891 the water-supply of Ahmadābād depended upon wells, tanks, and a pump-service from the Sābarmatī river, which, constructed in 1849 and improved in 1865, was situated in a somewhat insanitary portion of the city. The present works, which were opened in 1891 and were handed over to the municipality in the following year, cost nearly 8 lakhs, of which 4½ lakhs was contributed by Government. The head-works are situated at Dudheshwar on the left bank of the Sābarmatī, about 2,000 yards north-west of the city, and comprise four supply-wells, a pump-well, and a high-level reservoir, the water being pumped from the wells by steam-power. The total length of the service is 82 miles, and the annual expenditure, which is met by a water rate, amounts to about Rs. 53,000.

Military. The cantonment is situated north of the city at a distance of 3½ miles, and close by, in the Shāhi Bāgh, is the residence of the Commissioner. The cantonment usually contains a battery of artillery, a few companies of British infantry, and a Native regiment, and has an income of Rs. 14,000.

Arts and manufactures. Ahmadābād was formerly celebrated for its manufactures in cloth of gold and silver, fine silk and cotton fabrics, articles of gold, silver, steel, enamel, mother-of-pearl, lacquered ware, and

fine woodwork. It is now the centre of a rising cotton-mill industry. The Dutch founded a factory in 1618, which was removed in 1744. The building is now used by the Bombay Bank. No trace remains of the English factory founded in 1614 by Aldworth. It is not mentioned in 1780 when the city was captured by General Goddard. The prosperity of Ahmadābād, says a native proverb, hangs on three threads, silk, gold, and cotton; and though the hand manufactures are now on a smaller scale than formerly, these industries still support a large section of the population. All the processes connected with the manufacture of silk and brocaded goods are carried on. Of both the white and yellow varieties of China silk the consumption is large. Basra silk arrives in a raw state. The best is valued at Rs. 18 or Rs. 20 a pound. Bengal silk fetches almost an equal price. Ahmadābād silk goods find a market in Bombay, Kāthiāwār, Rājputāna, Central India, Nāgpur, and the Nizām's Dominions. The manufacture of gold and silver thread, which are worked into the richer varieties of silk cloth and brocade, supports a considerable number of people. Tin- and electro-plating are also carried on to some extent. Many families are engaged as hand-loom weavers working up cotton cloth. Black-wood carving is another important industry, and the finest specimens of this class of work may here be seen.

The common pottery of Ahmadābād is far superior to most of the earthenware manufactures of Western India. The clay is collected under the walls of the city, and is fashioned into domestic utensils, tiles, bricks, and toys. To give the clay a bright colour the potters use red ochre or *ramchi*, white earth or *khāri*, and mica or *abrak*, either singly or mixed together. No glaze is employed, but the surface of the vessels is polished by the friction either of a piece of bamboo or of a string of agate pebbles. A few of the potters are Musalmāns, but the majority are Hindus. A considerable manufacture of shoes and leather-work gives employment to a large number. The manufacture of paper, which was formerly an industry of some importance, is declining; and the little paper now made is used exclusively for native account-books.

The principal industry of Ahmadābād is the spinning and weaving of cotton yarn and piece-goods in factories. The first mill was opened 1861. By 1904 there were 34 mills, with about 569,000 spindles and 7,035 looms, employing 18,000 to 20,000 persons daily, and representing a capital of 150 lakhs. Some of the finest cloth woven in Indian mills is made at

Ahmadābād, usually from imported yarn. In 1904 the mills produced 42 million pounds of yarn and 26 million pounds of woven goods, largely for local consumption, though some part of the out-turn is exported. There are also an oil-mill, a match factory, and dye-works.

Education, &c. Besides 89 private and public vernacular schools, the city has an Arts college with a law class attached to it. It also contains two training colleges, one for male and the other for female teachers, a medical school, and a commercial class. In 1861 a law lectureship was founded in Ahmadābād, to which lectures in English, Sanskrit, logic, mathematics, and science were subsequently added; but the classes were poorly attended and were closed in 1873. In 1879 the Gujarāt College was reopened and affiliated to the Bombay University. Its average daily attendance is 143. In addition to the Gujarāt High School, recently opened, there were in 1904 five high schools with 1,927 pupils, and six middle schools with 416 boys and 134 girls; of the middle schools, three are girls' schools. The city contains five printing presses, and four vernacular newspapers are issued. There are a Victoria Jubilee Dispensary for women, a leper asylum, a lunatic asylum, eight dispensaries, and the usual station hospital. There are five libraries in the city, of which the Hemabhai Institute with 4,000 volumes is the best known. A club exists for the promotion of social intercourse between European and native ladies.

[Hope and Fergusson, *Architecture of Ahmadābād* (1866); Rev. G. P. Taylor, 'The Coins of Ahmadābād,' vol. xx of the *Journal of the Royal Asiatic Society, Bombay Branch* (1900); Jas. Burgess, 'Muhammadan Architecture of Bharoch, Cambay, Dholka, Chāmpānīr, and Muhammadābād in Gujarāt,' vol. vi of the *Archaeological Survey of Western India* (1896).]

Bavliari.—Seaport on the creek of the same name, in the Dhandhuka *tāluka* of Ahmadābād District, Bombay, situated in 22° 4′ N. and 72° 7′ E. Population (1901), 980. In 1903–4 the imports and exports were each valued at 8 lakhs, the chief articles of trade being cotton, grain, *ghī*, piece-goods, coco-nuts, oil, molasses, and timber.

Dhandhuka Town.—Head-quarters of the *tāluka* of the same name in Ahmadābād District, Bombay, situated in 22° 23′ N. and 71° 59′ E., on the right bank of the Bhādar, 62 miles south-west of Ahmadābād city and 100 miles north-west of Surat. Population (1901), 10,314. The town lies in an open plain, exposed to the burning winds of the hot

season. The water-supply is extremely bad. Bohrās and Modh Vānīs form a large class of the population. Coarse çloth, pottery, and carpenters' work are the chief industries. Together with Dholka, the town was ceded to the British in 1802. The municipality, established in 1860, had an average income of about Rs. 12,000 during the decade ending 1901. In 1903-4 its income was Rs. 16,000, including a grant of Rs. 5,000 for educational purposes. Dhandhuka is a place of some antiquity. In the twelfth century it rose to fame as the birthplace of the Jain teacher, Hemchandra, in whose honour Kumār Pāl of Anhilvāda raised a temple known as Vehar ('the cradle'). The survey for a railway extension from Dholka has been made. The town contains a Sub-Judge's court, a dispensary, and six schools, of which one is an English middle school for boys with 60 pupils and the remainder are vernacular schools, four for boys and one for girls, attended respectively by 465 and 120 pupils.

Dholera (or Roha Talao).—Seaport in the Dhandhuka *tāluka* of Ahmadābād District, Bombay, situated in 22° 15′ N. and 72° 11′ E., in the peninsula of Kāthiāwār, 62 miles south-west of Amhadābād city. It is one of the chief cotton marts in the Gulf of Cambay. Population (1901), 7,356. Dholera was the first part of the District to come into British possession. It was surrendered by the proprietors in 1802 to save themselves from the encroachments of the Bhaunagar chiefs, and was then a village of 300 houses, with no trade. Though called a port, the town of Dholera lies about 12 miles from the sea. The Bhādar or Dholera creek, on which it stands, is said to have been, a century ago, open for boats up to Dholera; but for the last seventy years the creek has silted up and trade passes through two ports—Khun, about 5 miles lower down on the same creek, and Bavliari, on an inlet of the sea, about 16 miles south. There is a lighthouse visible for 12 miles at the entrance to the creek. Dholera has given the trade name to a quality of cotton well-known in the European market. During the American Civil War (1862-5) it was the chief cotton port in Gujarāt. Before Dholera became a municipal town (1889), its conservancy and sanitary charges were met from the 'Dharam Talao' fund, created about the year 1818, for supplying water on the road to Dholera. The average income of the municipality during the decade ending 1901 was nearly Rs. 9,000, the income in 1903-4 being Rs. 9,600. The town contains a dispensary and five schools, of which one is an English middle school for boys with

28 pupils and the rest are vernacular schools, three for boys and one for girls, attended respectively by 350 male and 152 female pupils. The sea-borne trade in 1903–4 was valued at 19 lakhs: imports 6 lakhs, and exports 13 lakhs.

Dholka Town.—Head-quarters of the *tāluka* of the same name in Ahmadābād District, Bombay, and present terminus of the Ahmadābād-Dholka Railway, situated in 22° 44′ N. and 72° 27′ E., 22 miles south-west of Ahmadābād city. Population (1901), 14,971. The extension of the railway to Dhandhuka is under consideration, and a survey has been made. Dholka is situated amidst ruined palaces, mosques, mausoleums, and spacious tanks embanked and lined with masonry. Though not regularly fortified, it is surrounded by a wall of mud 4 miles in circumference, and is probably one of the oldest towns in Gujarāt. It is supposed, in the early Hindu period, to have been visited by the Pāndavas, to have sheltered prince Kanaksen of the Solar race, and Minal Devī, the mother of Siddha Rājā of Anhilvāda (1094–1143), and to have been held by Vir Dhaval, the founder of the Vāghela dynasty (thirteenth century). During the Muhammadan period Dholka was the residence of a governor from Delhi, and it still contains the remains of many fine Musalmān buildings. It was taken by the Marāthās in 1736, came into the Gaikwār's hands in 1757, and was eventually ceded to the British in 1804. The greater part of the inhabitants are Kasbātis (townsmen), the descendants of the soldiers of fortune who came with the Vāghelas when driven from Anhilvāda by Khiljī Alā-ud-dīn in 1298. The municipality, established in 1856, had an average income of Rs. 15,000 during the decade ending 1901. In 1903–4 the income was Rs. 17,000, derived chiefly from octroi (Rs. 11,000). The town contains a Sub-Judge's court, a dispensary, a mission orphanage, and seven schools, of which one is an English middle school with 62 boys, one an English class with 4 boys attached to the mission orphanage, and five vernacular schools—four for boys with 899 pupils and one for girls with 151.

Gogha.—Town in the Dhandhuka *tāluka* of Ahmadābād District, Bombay, situated in 21° 41′ N. and 72° 17′ E., in the peninsula of Kāthiāwār, on the Gulf of Cambay, 193 miles north-west of Bombay City. Population (1901), 4,798. About three-quarters of a mile east of the town is an excellent anchorage, in some measure sheltered by the island of PIRAM, which lies still farther east. It appears to have been known as the port of Gundigar in the days of the Vallabhi kingdom,

and was mentioned by Friar Jordanus in 1321 as Caga. The natives of this town are reckoned the best sailors or lascars in India; and ships touching here may procure water and supplies, or repair damages. The roadstead is a safe refuge during the south-west monsoon, or for vessels that have parted from their anchors in the Surat roads, the bottom being a uniform bed of mud, and the water always smooth. There is a lighthouse on the south side of the entrance, visible for 10 miles. When the Dutch raised Surat to be the chief port of Gujarāt, the Cambay ports were more or less injured. Gogha has of late years lost its commercial importance. During the American Civil War it was one of the chief cotton marts of Kāthiāwār. It is now deserted, its cotton-presses idle, and its great storehouses ruinous and empty. Its rival, Bhaunagar, is 11 miles nearer to the cotton districts, and has the advantage of railway communication. North of the town is a black salt marsh, extending to the Bhaunagar creek. On the other sides undulating cultivated land slopes to the range of hills, 12 miles off. South of the town is another salt marsh. The land in the neighbourhood is inundated at high spring-tides, which renders it necessary to bring fresh water from a distance of a mile. The town contains a Sub-Judge's court, a dispensary, and four boys' schools, of which one is an English middle school with 18 pupils and three are vernacular schools with 230 pupils, including one girl. The municipality, established in 1855, had an average income of Rs. 4,000 during the decade ending 1901. In 1903–4 its income was Rs. 5,800. The sea-borne trade of Gogha in 1903–4 was valued at Rs. 1,87,000: exports, Rs. 81,000; imports, Rs. 1,06,000.

Khāraghoda.—Village in the Viramgām *tāluka* of Ahmadābād District, Bombay, situated in 23° N. and 71° 50′ E., on the border of the Little Rann of Cutch. Population (1901), 2,108. At the time when Ahmadābād passed to the British, the eastern shore of the Little Rann contained five large salt-works in the possession of petty chiefs. These were gradually acquired by purchase between 1822 and 1840, and were subsequently closed in 1875 in favour of a single manufactory at Khāraghoda. This, however, proved unequal to meeting the constantly increasing demand for salt; and in 1881–2 new salt-works were opened at Ooru, which is 6 miles north of Khāraghoda and is connected with it by a line of rail. In 1904–5 the total out-turn of salt from these two works was 2,545,521 maunds, of which 2,313,965 maunds were sold.

Khāraghoda is the head-quarters of two Assistant Collectors of Salt Revenue, of whom one is in charge of the works and the other of the preventive establishment which patrols a line extending from Dhanduka to Jamaiya. The town contains a dispensary, a library, a *dharmsāla*, and a market; and water is supplied by pipes from a tank built at a cost of 2¾ lakhs about a mile to the north of the town.

Mandal.—Town in the Viramgām *tāluka* of Ahmadābād District, Bombay, situated in 23° 17′ N. and 71° 55′ E., 15 miles north-west of Viramgām station on the Bombay, Baroda, and Central India Railway. Population (1901), 5,091. The municipality, established in 1889, had an average income of Rs. 5,000 during the decade ending 1901. In 1903–4 the income was Rs. 5,230. The town contains some mosques of archaeological interest: notably, the Jāma Masjid, the Saiyid Masjid, the Kāzī Masjid, and the Ganjni Masjid. It also contains a dispensary, and three boys' schools and one girls' school, attended respectively by 255 and 54 pupils.

Modāsa.—Town in the Parāntīj *tāluka* of Ahmadābād District, Bombay, situated in 23° 18′ N. and 73° 18′ E., on the Mājham river, 52 miles north-east of Ahmadābād city. Population (1901), 7,276. Modāsa occupies an important strategical position between Gujarāt and the hilly tracts constituting the Native States of Idar and Dungarpur. In the reign of Sultān Ahmad of Gujarāt (1411–43) it was a fortified post; and at the close of the sixteenth century it was the chief place in a tract of 162 villages, yielding a revenue of 8 lakhs. It is an old town with several inscriptions. The chief industries are dyeing, calico-printing, and oil-pressing. *Mahuā* oil is exported for soap. There is a through camel traffic in raw cotton and opium with Mālwā. Modāsa was constituted a municipality in 1859. The income during the decade ending 1901 averaged about Rs. 6,000, and in 1903–4 amounted to Rs. 6,800. The town contains a dispensary and five schools, of which one is an English middle school for boys with 22 pupils, and four are vernacular schools—namely, three for boys with 392 pupils and one for girls with 86 pupils.

Parāntīj Town (*Parāntej*).—Head-quarters of the *tāluka* of the same name in Ahmadābād District, Bombay, with a station on the Ahmadābād-Parāntīj Railway, situated in 23° 26′ N. and 72° 51′ E., 33 miles north-east of Ahmadābād city. Population (1901), 8,175. Parāntīj is a prosperous town, and has been a municipality since 1855. The income during the decade ending 1901 averaged Rs. 7,000, and in 1903–4

amounted to Rs. 7,700. The chief exports are *ghī*, grain, and leather. Formerly there was a considerable local soap industry, but this has now greatly decreased. The town contains 6 schools, 5 for boys and one for girls, attended by 644 male and 109 female pupils. These include an English middle school with 19 pupils, and a mission orphanage with an industrial class attached to it. There is also a dispensary.

Pātri (*Pātdi*).—Town in the Viramgām *tāluka* of Ahmadābād District, Bombay, situated in 23° 11′ N. and 71° 53′ E., on the Bombay, Baroda, and Central India Railway, 58 miles west of Ahmadābād city, on a bare plain at the border of the Rann of Cutch. The town is surrounded by a wall and contains a strong castle. Population (1901), 5,544. The chief trade is in cotton, grain, and molasses. The town has a dispensary and two vernacular schools, one of which is for girls, attended by 242 and 128 pupils respectively.

Piram (*Perim*).—Island in Ahmadābād District, Bombay, situated in 21° 36′ N. and 72° 21′ E., in the Gulf of Cambay, 4½ miles south of Gogha, and 2½ from the nearest part of the Kāthiāwār shore. Piram is a reef of rock covered in part by brown sand, its dimensions at high water being one mile by about half a mile. It is included in the estate of the Gogha Kasbātis, to whom it was assigned by one of the Delhi emperors. Except on the south, it is surrounded by rocky reefs rising to the surface from a depth of from 60 to 70 feet. Past the island the tide runs with extreme force. To avoid the chopping sea and sunken reefs, boats crossing from Gogha to Piram stand out as if making for Dehej Bara at the mouth of the Narbadā. In the east of the island millet is grown and the low sand-hills are covered by asclepias. Beyond these are some *nīm* trees (*Melia Azadirachta*) and a fringe of mangrove bushes. The island is uninhabited in the rains, but contains a few families of husbandmen and fishermen during the fair season. On the ruins of an old bastion there is a dioptric light of the fourth order, visible for 17 miles.

Piram is the Baiones Island of the *Periplus*. Till the fourteenth century it would seem to have remained in the hands of Bāriya Kolīs. Then under their leader Mokharjī, the Gohel Rājputs, who about a century and a half earlier had retired from Mārwār to Gujarāt, passed south from Rānpur near Dhandhuka and took Gogha and Piram. Strengthening himself in his island fortress, Mokharjī became a great pirate chief; but his power was short-lived. About the year 1300 complaints of his piracies were laid before Muhammad bin Tughlak, who

was then in Gujarāt quelling a revolt. Advancing in person he attacked Piram, slew Mokharjī, and took his fort. The island was then deserted, and an attempt to colonize and fortify it failed. The Hindu seamen of the Gulf of Cambay still cherish Mokharjī's memory, seldom passing Piram without making him an offering. Of his stronghold there remains, skirting the shore, a ruined wall, with, below high-tide level, a gateway ornamented by two rock-cut elephants 10 feet long and 8 or 9 feet high. No further attempt would seem to have been made to fortify Piram till, on the decay of Mughal power, about the middle of the eighteenth century, the ambitious Surat merchant Mullā Muhammad Alī built a fort on the island and tried to establish himself as an independent chief. Afraid of the climate his people forsook him, and the Mullā, giving up Piram, built a fort at Athva on the Tāpti, a few miles below Surat. The lines of the Mullā's fortress, from whose ruins the lighthouse tower was built, may be seen near the centre of the island stretching across its entire breadth. Besides traces of fortifications there are remains of temples, one of them with a rudely cut sitting figure of Buddha. The local story that Mokharjī built a mole from the mainland to Piram has, perhaps, no better foundation than the half-sunk wall and gateway and the reefs that, at low water, stand out like a giant's causeway.

Its large store of fossils gives a special interest to Piram. Besides masses of petrified wood, large quantities of animal remains were found in 1836. Almost all were embedded in the rock in the south-east corner of the island, where the sea washes bare the lower conglomerate. The remains are the same as those of Upper Sind and of the Siwālik Hills. Besides two titanic ruminants, apparently with no living types, named the Bramatherium and the Sivatherium, there are species of elephant, rhinoceros, hippopotamus, horse, ox, antelope, several forms of crocodile, fresh-water tortoises, and fishes of gigantic size.

Rānpur.—Town in the Dhandhuka *tāluka* of Ahmadābād District, Bombay, situated in 22° 21′ N. and 71° 43′ E., on the north bank of the Bhādar river, at its confluence with the Goma. Population (1901), 6,423. On the raised strip of land between the two rivers is an old fort, partly in ruins. Rānpur was founded about the beginning of the fourteenth century by Rānājī Gohil, a Rājput chieftain, the ancestor of the Bhaunagar family. Here his father Sekājī had settled, and named the place Sejākpur; but the son, having

strengthened Sejākpur with a fort, called it Rānpur. Some time in the fifteenth century the ruling chief embraced the Muhammadan religion and founded the family of the present Rānpur Molesalāms. About 1640 Azam Khān built the fort of Shāhāpur, whose ruins still ornament the town. In the eighteenth century Rānpur passed to the Gaikwār, and from him to the British in 1802. Rānpur is a station on the Bhavnagar-Gondal Railway. The municipality, established in 1889, had an average income of about Rs. 6,000 during the decade ending 1901. In 1903-4 the income amounted to Rs. 6,800. The town contains a dispensary and three schools, of which one is an English middle school with 33 pupils, and two are vernacular, one for boys and one for girls, attended respectively by 317 and 125 pupils.

Sānand Town.—Head-quarters of the *tāluka* of the same name in Ahmadābād District, Bombay, situated in 23° N. and 72° 23′ E., on the Bombay, Baroda, and Central India Railway, 18 miles from Ahmadābād city. Population (1901), 6,783. It was formerly one of the capitals of the house of Koth. The municipality, established in 1885, had an average income of about Rs. 8,000 during the decade ending 1901. In 1903-4 the income amounted to Rs. 8,500. The town contains three schools, two for boys and one for girls, attended respectively by 310 and 128 pupils, and including an English middle school with 25 pupils.

Viramgām Town.—Head-quarters of the *tāluka* of the same name in Ahmadābād District, Bombay, situated in 23° 7′ N. and 72° 3′ E., on the Wadhwān branch of the Bombay, Baroda, and Central India Railway, and also the junction for the Gaikwār-Mehsāna and the Khāraghoda sections of the Rājputāna-Mālwā Railway. Population (1901), 18,952. The town possesses two cotton-mills, and is the centre of the cotton and oilseed trade of the District. Viramgām has a municipality, established in 1857, with a revenue averaging about Rs. 35,000 during the decade ending 1901. In 1903-4 the income amounted to Rs. 37,500. It is supplied with water chiefly from three reservoirs, of which the Mansar lake, built about 1090 by Minal Devī, the mother of Sidh Rājā, king of Anhilvāda (1094-1143), is the chief attraction of the place. It is bordered by numerous small shrines of architectural merit. Close by are two old temples devoted to Krishna and Mahādeo. The town contains a Sub-Judge's court, two dispensaries, a high school with 49 pupils, and a middle school with 126 pupils.

Boundaries, configuration, and hill and river systems.

Kaira District (*Kheda*).—District in the Northern Division of the Bombay Presidency, lying between 22° 14′ and 23° 71′ N. and 72° 30′ and 73° 23′ E., with an area of 1,595 square miles. It is bounded on the north by Ahmadābād District, Mahī Kāntha, and the small State of Bālāsinor in the Rewā Kāntha Agency; on the west by Ahmadābād District and the State of Cambay; on the south and east by the river Mahī and the Gaikwār's territory (Baroda). The breadth of the District varies from 25 to 40 miles.

Excepting a small corner of hilly ground near its northern boundary, and in the south-east and south, where the land along the Mahī is furrowed into deep ravines, Kaira forms one unbroken plain sloping gently towards the south-west. The north and north-east portions are dotted with patches of rich rice land, broken by untilled tracts of low brushwood. The centre of the District, called the *charotar*, or 'goodly' land, is very fertile and highly cultivated; the luxuriant fields are surrounded by high-growing hedges, and the whole country is dotted with clusters of large shapely trees. Westward, this belt of rich vegetation passes into a bare though well-cultivated tract of rice land, growing more barren and open to the south till it reaches the maritime belt, whitened by a salt-like crust, on the Gulf of Cambay.

The Mahī, the largest river of Kaira, and the third in importance of the Gujarāt rivers, flows for nearly 100 miles along the east, south-east, and south boundary of the District. This 100 miles may be divided into three sections: first a stretch of 40 miles over a rough and rocky bed, then 10 miles of a still stream with a sandy bed, and lastly 45 miles of a tidal river. The fords in the District are at Kāvi, Dehvān, Gajna, Khānpur, and Ometa. At Verākhāndi, the limit of the flow of the tide, the bed is in the dry season 500 yards wide, the stream 120 yards, and the average depth $1\frac{1}{2}$ feet. A small 'bore' rises in the estuary at springs and dashes itself on the Dehvān. The Sābarmatī, the fourth largest river in Gujarāt, flows for 14 miles along the western boundary, and is much used for irrigation. The Shedhi, the chief drainage line of the plain between the Mahī and the Sābarmatī, being charged with soda, is not adapted for irrigation. The Khāri, one of five smaller streams, waters a large area by means of canals and sluices, but fails at the end of the rice season, that is to say about November.

Geology.

The District has not yet been geologically surveyed in any detail. The Kaira plain is, with the exception of the few

sandy hills and rocks in Kapadvanj and Thāsra, a deep bed of alluvium, most of it the débris of the gneiss and metamorphic limestones of the Arāvalli Hills. In the raised tract along the banks of the Mahī, water is found only at a depth of from 80 to 110 feet. Away from the river, wells have their springs from 40 to 60 feet deep, rising through strata of earth mixed with limestone nodules, alternating with sand overlying layers of limestone. From this limestone, when tapped, water rises to within 25 feet of the surface. The age of these strata is not known. They may be Tertiary or Cretaceous. Formerly, in parts of the District, water was to be found at a higher level. Many old wells are said to have been made useless by the earthquake of 1819, which lowered all the springs from 5 to 10 cubits. In some cases deeper sinking has overcome the evil; in others, a fine stratum of quicksand makes farther cutting dangerous. The hot springs of Lasundra, 10 miles south-east of Kapadvanj, rise to the surface in ten or twelve cisterns, the hottest reaching a temperature of 115°. Like those at Tuva in Godhra, 20 miles to the south-east, and at Anāval, 150 miles south, the Lasundra springs are slightly sulphurous, and thought to be useful in skin diseases.

Botany. The District has no forests or forest lands, the trees either standing singly or in small groves. In the north the *mahuā* (*Bassia latifolia*), and in the south the mango and the *limbdo* or *nīm* (*Melia Azadirachta*), are the commonest kinds, while the custard-apple, *sitāphal* (*Anona squamosa*), is abundant all over the District. The *rāyan* (*Mimusops hexandra*), the *kanaj* (*Ulmus integrifolia*), the *karanj* or *kaniji* (*Pongamia glabra*), and the *aduso* (*Ailanthus excelsa*) also occur freely distributed. Mangoes are sent in considerable quantities to Baroda, Ahmadābād, and Kāthiāwār. During the hot season the fleshy corolla of the *mahuā* flower is eaten by the poorer classes and by cattle, and from it is distilled a favourite liquor. Mixed with whey, the berries of the *rāyan* form, during the hot season, the staple food of a large section of the Kolī population.

Fauna. Tigers and leopards, which haunted the bed of the Mahī till a few years ago, are now rarely heard of, owing to the spread of tillage and their pursuit by European sportsmen. Hyenas, jackals, foxes, wild hog, antelope, gazelle, and hares are common. Of game-birds, snipe, quail, and many species of duck abound; while geese, bustard, partridge, and florican may occasionally be shot. Poisonous snakes are common. Mahseer and other fresh-water fish are caught in the waters of the larger rivers.

Climate and temperature. To Europeans the climate is trying. From November to March the air is pleasant and bracing. By the people of the District the *charotar* or central portion is considered healthy.

Rainfall. The rainfall varies but slightly in different parts of the District. The annual fall is 38 inches in the Nadiād, Borsad, and Anand *tālukas*, while it averages about 34 inches over the whole District. The average temperature is 82°, the maximum being 116° and the minimum 43°.

History. Kaira District is made up partly of lands acquired from the Peshwā in 1802 by the Treaty of Bassein, partly of territory transferred by the Gaikwār of Baroda in 1803 and 1817. Rājputs reigned in Kaira from 746 to 1290, and, excepting perhaps Thāsra and Kapadvanj, the District formed part of the directly managed portions of ANHILVĀDA. At the end of the fourteenth century Kaira passed to the Muhammadan kings of Ahmadābād, and in 1573 was transferred to the Mughals. In 1720 the Marāthās appeared, and from that time to the fall of Ahmadābād in 1752 the District was the scene of perpetual struggles between the Marāthās and the Muhammadan viceroys. The Marāthās were victorious, and in 1753 the District was shared between the Peshwā and the Gaikwār. Part of Kaira came into British possession in 1803, and the rest in 1817. Under the terms of the Treaty of Bassein (December 31, 1802), the Nāpād group of villages was handed over by the Peshwā. In 1803 the Gaikwār ceded Nadiād, Mātar, and Mahudha, as well as the fort and town of Kaira, for the maintenance of troops supplied by the British Government. Again, by treaty dated November 6, 1817, the Gaikwār ceded Mehmadābād, Alīna, Thāsra, Antroli, and half of the town and district of Petlād to provide for the payment of additional troops. At the same time, Kapadvanj and Bhālaj were received in exchange for the district of Bijāpur in Northern Gujarāt.

The territories acquired in 1803, together with Dholka, Dhandhuka, Rānpur, and Gogha, which now form part of Ahmadābād District, remained in charge of the Resident at Baroda from the date of their cession till May, 1805. During this time a European Assistant and native officers administered, according to local usage, the police and justice of the country. In 1805 a Collector was appointed, with jurisdiction over the ceded tracts, both those to the north of the Mahī and those to the west of the Gulf of Cambay. In the same year the town of Kaira was selected as a large military station. The increase in the British possessions

consequent on the treaty of November, 1817, necessitated fresh administrative arrangements. The territory north of the Mahī was, from January 1, 1818, divided into the two Districts of Kaira and Ahmadābād. In 1830 Kapadvanj was included in Ahmadābād, and Kaira became a sub-collectorate under the Collector of Ahmadābād. In 1833 Ahmadābād and Kaira were again separated. Since then, more than once, villages have been transferred from one District to the other, and the original irregular groups and collections of villages have been gradually consolidated into seven *tālukas*.

Archaeology.

Throughout the District are Hindu and Musalmān buildings of interest. The *rauza* of Mubārak Saiyid (died A.H. 966) at Sojāle is one of the finest of the latter. Kapadvanj contains some buildings of great antiquity: a beautiful arch described by Forbes in his *Rās Mālā*, a *kund* or basin of consecrated water, a mosque, and a well; and an underground temple of Mahādeo which has recently been explored for the first time. It is also remarkable for a fine Jain temple recently built.

The people.

In 1846 the population of Kaira District was returned at 566,513. By 1872 it had risen to 782,938. In 1881 the population was 805,005; in 1891, 871,794; and in 1901, 716,332. The decrease of 18 per cent. during the last decade was due to the famine and cholera of 1899–1900. The District is divided into 7 *tālukas*, with area and population (1901) as given in the following table:—

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Kapadvanj	279	1	87	75,258	270	− 26	5,591
Mehmadābād	171	2	66	75,926	444	− 18	7,007
Thāsra	257	1	96	73,980	288	− 22	6,154
Mātar	216	1	81	61,522	285	− 22	4,884
Nadiād	224	2	91	148,452	663	− 13	16,099
Anand	244	3	85	143,305	587	− 16	18,336
Borsad	204	1	92	137,889	673	− 15	12,631
District total	1,595	11	598	716,332	449	− 18	70,702

The number of towns in the District in 1901 was 11, and of villages 598. The chief towns are NADIĀD, KAPADVANJ, KAIRA (the head-quarters), ANAND, and MEHMADĀBĀD. Owing to the large fertile areas which the District comprises, it is the most thickly populated in the Presidency. The most populous *tālukas* are Nadiād, Borsad, and Anand. Gujarātī

is the vernacular. Classified according to religion, Hindus in 1901 numbered 614,146, or 85 per cent. of the total; Muhammadans, 68,187, or 9 per cent.; Christians, 25,210; Jains, 8,469; and Pārsīs, 209.

Castes and occupations. The following castes are of importance: Brāhmans, 38,000; Vānīs, 22,000; Rājputs, 21,000; Chamārs, 13,000; Kunbīs (agriculturists), 127,000; Kolīs (agriculturists), 252,000; Dhers or Mahārs, 21,000. The Muhammadans include 16,000 Pathāns and 10,000 Bohrās.

The Lewa and Kādva Kunbīs are the best farmers in the District, and a sober, peaceable, and industrious race. The Kunbīs of certain villages are held in honour as descended from the leading men among the original settlers in Gujarāt. The Rājputs, with the exception of a few who, with the title of Thākur, still retain landed estates, have sunk into the mass of ordinary peasant proprietors. The Kolīs number 252,000, or 35 per cent. of the total population. Idle and turbulent under native rule, they are now quiet, hard-working, and prosperous. Among Hindu low castes, the Dhers are distinguished for industry and good behaviour. They formerly lived in comfort by weaving coarse cotton cloth, but the competition of the Bombay and local mills is now shutting them out of the market. Of the Musalmān population, about one-third, under the name of Saiyids, Shaikhs, Pathāns, and Mughals, represent the foreign conquerors of Gujarāt. The remainder, called Momnas, Bohrās, Tais, and Ghānchis, are the descendants of Hindus converted to Islām under the Ahmadābād kings. Musalmāns of the first class, employed chiefly as cultivators or in Government service as police or messengers, are for the most part poor. Musalmāns of the second class are artisans, chiefly weavers and oil-pressers, and are hard-working and well-to-do. Most of the population are dependent on agriculture, which supports 67 per cent. of the total. General labour supports 4 per cent., and the remainder are distributed between commerce and trade, personal service, &c. Over 15,000 are engaged in cotton-weaving.

Christian missions. At the Census of 1901 the native Christian population of the District was returned at 25,131, showing an increase of no less than tenfold since 1891. This may to some extent be the result of conversions to Christianity during the famine; but it is noteworthy that the Salvation Army has been active in Kaira for some years, and that a large number of the Christians are Salvationists, mainly converted from the lowest classes. Besides the Salvation Army, the following missions are at

work in the District: the Irish Presbyterian, with stations at Borsad and Anand, which maintains 2 Anglo-vernacular and 46 vernacular schools, 4 orphanages, and a hospital at Anand, and has settled 14 colonies of converts on waste land procured from Government; the Methodist Episcopal at Nadiād, which maintains 165 schools, an industrial school, an orphanage, and a dispensary, and which undertook extensive relief operations in the famine of 1900; the Christian Alliance in the Mātar *tāluka*, which maintains 9 schools and an orphanage and industrial school at Kaira; and the Roman Catholic at Anand, which maintains 19 schools, an industrial school, and an orphanage and dispensary. The Salvation Army maintains 112 schools and a well-equipped hospital at Anand, which is very popular among all classes. Khāsivādi, 'the beautiful garden,' in Borsad town was the first to show a leaning towards Christianity, two families having been converted there in 1847. There is an English church at Kaira known as St. George's Church, established about 1825.

General agricultural conditions.

The soil belongs to four classes: light, medium, black, and alluvial, with subordinate varieties. The light soil is the most common, varying in quality from the loose-grained yellow sand of the fields near the Sābarmatī and the Mahī, to a rich lighter mould common in the central *tālukas*, and found to perfection in the south-west corner of Mātar. The medium soil is fairly well distributed over the whole District. The black soil of Kaira is poor and generally contains either soda or limestone. Alluvial soil or *bhātha* is found near the Vātrak river and is a rich garden mould.

Chief agricultural statistics and principal crops.

The greater part of the land of the District is *ryotwāri* (1,075 square miles, or 88 per cent. of the total area), about 7 per cent. being held on *udhad* or quit-rent tenure. The main statistics of cultivation in 1903-4 are shown in the following table, in square miles:—

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.
Kapadvanj	279	182	2	45
Mehmadābād	171	131	5	13¼
Thāsra	257	141	½	52
Mātar	216	141	3	34
Nadiād	224	191	10	6
Anand	244	196	4½	2¼
Borsad	204	149	12	¼
Total	1,595*	1,131	37	153

* The area for which statistics are not available is 129 square miles.

The chief crops, with the area under each in square miles (1903–4), are: *bājra* (313), *kodra* (162), rice (115), *jowār* (91), and wheat (18).

Cotton is grown in small patches (10 square miles). The finest tobacco in Western India is grown in Kaira, occupying 24 square miles, mostly in the Nadiād, Borsad, and Anand *tālukas*; but the cultivators, though skilful in rearing the plant, know nothing of its preparation for the European market. Two varieties of tobacco are grown, the *talabdi* or local plant and the *khāndeshi* or plant introduced from Khāndesh. An irrigated field yields twice as large a crop as a dry one. About the beginning of July, as soon as the first rain has fallen, the seed is sown in a well-prepared plot of ground, and after about a month and a half the seedlings are ready for transplantation. The field is scored in squares by a heavy, long-toothed rake, and at each point of intersection a seedling is set. The plant takes about five and a half months to ripen. As soon as it is ready, it is carefully examined, and divided into two classes, *kālio* and *jardo*; the *kālio* is cut down, stalk and all, and laid out to dry; the *jardo* is left a little longer, and then the leaves are stripped off the stem. A moth caterpillar is the chief enemy of the plant. Tobacco-growing is a costly process, and can be undertaken only by substantial cultivators. It has been calculated that the cost of growing an acre of plant is Rs. 270, and the profit Rs. 110. Cotton is grown only from the local plant, and occupies every seventh furrow in fields sown with ordinary grain crops.

Improvements in agricultural practice.

Several attempts have been made to improve the Kaira cotton, but without success. Indigo was once one of the chief exports from Gujarāt, but by 1827 it had almost ceased to be produced. A later attempt to encourage the growth in Kaira was attended with failure. A Government silk garden was started in 1837, but was closed in 1847. The Nadiād Agricultural Association's small experimental farm has been removed to Kamta, and has practically been handed over to the department of Agriculture, which has enlarged its scope and is providing new buildings. Numerous experiments in the cultivation of tobacco and other staple crops of the District have been made. It has been ascertained in the course of these experiments that a better yield of tobacco is obtained by growing it continuously instead of in rotation, that deep tillage increases the out-turn, and that Sumatra tobacco cannot be grown. The *desi* or local tobacco stands first in quality and quantity, and the Belgaum varieties second. During the ten

years ending 1903-4, a total of 19·8 lakhs was advanced to cultivators under the Land Improvement and Agriculturists' Loans Acts, of which 7·7 lakhs was lent in 1899-1900, and 8·8 lakhs in 1900-1.

Cattle are imported from Kāthiāwār and Kānkrej in Northern Gujarāt. Some of the largest used to be bred in the District at Bhālaj, and many villages of the Nadiād *tāluka* are famous for their bullocks. Ponies are bred in the District, but they are not suitable for cavalry remounts. Two Government pony stallions are maintained by the Civil Veterinary department. Cattle and ponies.

Of the total cultivated area of 1,131 square miles, 37 square miles, or 3 per cent., were irrigated in 1903-4. The chief sources of irrigation are 11 minor works, 10,886 wells, and 1,391 tanks. The wells most commonly in use are deep, shallow wells being found only in the Mātar *tāluka*. The water is drawn up by bullocks in four leathern bags working simultaneously. The ponds are used for irrigating rice lands. After the close of the cold season few of them hold any large supply of water. The Khāri sluice system irrigated nearly 8,800 acres in 1903-4. In 1902 large reservoirs were constructed at Goblaj, Tranja, Nagrama, and Vangroli by famine labour. Irrigation.

Iron ore was at one time worked in the neighbourhood of Kapadvanj. In the bed of the Mājam river, about 15 miles from Kapadvanj, are found varieties of agate and moss-stone. The bed of the Mahī contains masses and boulders of trap; while on its upper course, on the Bālāsinor frontier, rock is plentiful, including trap, with occasional limestone, quartz, and granite. Minerals.

The opening of steam factories at Ahmadābād and at Nadiād has greatly reduced the demand for hand-spun cotton, once a staple. The water of the District is thought to be especially good for dyeing purposes. Soap and glass are manufactured at Kapadvanj. A steam spinning mill, established at Nadiād in 1876 at a cost of about 5 lakhs, has 14,568 spindles, which turn out over a million pounds of yarn, and employ 584 persons. Considerable quantities of coarse cloth for home consumption are woven in hand-looms by the lower castes of Hindus. In the larger towns calico printing is carried on by classes known as Bhavsārs and Chhīpas. Arts and manufactures.

The chief exports are cotton prints, grain, tobacco, butter, oil, and *mahuā* flowers; the chief imports are piece-goods, grocery, molasses, and dye-stuffs. Kaira is particularly noted for its *ghī* or clarified butter, the export of which is valued at 8 lakhs. The *ghī* when made is forced into large leathern bottles holding from 60 to 200 lb. Commerce.

Communications. Railways and roads.

In 1884 there was only one made road in the District. There are now 166 miles of metalled and 19 of unmetalled roads. Of the former, 33 miles of Provincial roads and 123 miles of local board roads are maintained by the Public Works department. All the watercourses are bridged except the large rivers, and avenues of trees are maintained along 49 miles. New roads were constructed by famine labour in 1900 from Mehmadābād to Dākor and from Borsad to Agas railway station. The whole of the District is connected with Ahmadābād city by metalled roads. The main line of the Bombay, Baroda, and Central India Railway passes through the District from north to south for 38 miles, and a branch line from Anand runs through the Pānch Mahāls to Godhra, where it connects with the Godhra-Ratlām Railway, traversing the District for 34 miles. In 1890 another branch line was opened from Anand to Petlād in Baroda territory, and thence in 1901 to Cambay town, thus bringing Kaira into close connexion with the sea. This line traverses the District for 6 miles. Ferries ply across the Mahī.

Famine.

A severe famine took place in 1791-2, when rain fell only once; in 1813-4 there were only two showers of rain throughout the year; in 1825 the later rains failed, and remissions of land revenue to the amount of over $1\frac{1}{2}$ lakhs were granted. On the other hand, the period 1814-22 was marked by heavy floods and rainfall that caused much damage to the country. In 1834 locusts ate up the crops, and remissions amounting to nearly 2 lakhs were sanctioned. In 1837, 1868, and 1871 disastrous storms swept over the District. During the forty years 1836-76, though the rainfall had at times been scanty and the crops failed, no season of famine or even of general scarcity occurred in Kaira. Owing to the scanty rainfall in 1877 (19·13 inches), there was a partial failure of crops, and the poorer people, especially in the Kapadvanj and Thāsra *tālukas* in the north-east, suffered some distress, which, however, did not leave behind serious results. In 1899 the monsoon failed and the District was visited by severe famine. In April of the following year nearly 85,000 persons, exclusive of 8,000 dependants, were on relief works, and 15,000 more received gratuitous relief. The number increased to 143,000 by July of the same year, excluding 13,000 dependants and 38,000 on gratuitous relief. The latter reached a maximum of 113,000 in August. It is calculated that there was, during the three years 1900-2, an increase of 112,464 deaths over the yearly average. The loss of cattle in the year 1899-1900 amounted to 233,000. The cost

of relief measures in the District, including the Pānch Mahāls, was over 88 lakhs. Remissions of land revenue to the amount of 35 lakhs were granted in these two Districts. The loans granted to agriculturists in Kaira alone amounted to 19 lakhs.

District subdivisions and staff.

The District is divided into two subdivisions, in charge of an Assistant Collector and a Deputy-Collector respectively, and is composed of the seven *tālukas* of ANAND, BORSAD, KAPADVANJ, MĀTAR, MEHMADĀBĀD, NADIĀD, and THĀSRA. The Collector is *ex-officio* Political Agent for Cambay State and Additional Political Agent for Rewā Kāntha.

Civil and criminal justice.

For judicial purposes the District is included in the jurisdiction of the Judge of Ahmadābād. There are 5 Subordinate Judges for civil work, and 23 officers, including a bench of magistrates, to administer criminal justice. The common offences are murder in Borsad and Anand, and housebreaking, burglary, cattle-stealing, and thefts elsewhere.

Land revenue administration.

In 1803, when Kaira was ceded to the British, the District afforded examples of various forms of land revenue administration. In the centre were three kinds of villages: *rāsti* or peaceable, *mehwās* or refractory, and an intermediate class of *rāsti-mehwās* villages. The refractory villages were occupied by the turbulent descendants of the Rājput and Kolī warriors. Here Kolī *thākurs* or chiefs administered despotically their little clusters of huts. Revenue was demanded but seldom paid. The peaceable villages were mostly grants from Government to those who had done some public service. The most important Muhammadan grants were called *māliki*, and were held rent-free. Internal administration was the concern of the village community. There were four forms of village government, the commonest being that by which the village headman engaged annually for the payment of a certain sum to Government. The profits of a good year, under this the most simple and general system, went to the headman; on the other hand, the headman had to bear any loss from failure of crop or short tillage. Above the headman or *pātel* were the revenue-farmers (*kamāvisdārs*), who fixed the village contributions; and below the headmen were the cultivators and coparceners of the village. A class quite apart, called *manotidārs*, or money-lenders, arose as sureties for the payment of the revenue. This short statement furnishes an outline of the Marāthā revenue system. It had the merit of simplicity and was calculated to ensure the recovery of revenue. At the same time it is clear that it was productive of abuses and suffering to the cultivating classes. When the District was taken over by the British in 1803, the

system was continued with but small modification until 1862. In that year the revenue survey system, which deals directly with individual cultivators, was introduced. The result of the survey assessment was to increase the land revenue demand from $11\frac{1}{2}$ to $13\frac{1}{4}$ lakhs, or by 11 per cent. In 1894 a resettlement was undertaken and completed in 1896, which further enhanced the total revenue by 17 per cent. The average rates of assessment are: 'dry' land, Rs. 3-7 (maximum Rs. 6-12, minimum Rs. 1-8); rice land, Rs. 5-11 (maximum Rs. 6-12, minimum Rs. 1-8); garden land, Rs. 9-9 (maximum scale Rs. 7, minimum Rs. 5).

Collections of land revenue and total revenue have been as follows in recent years, in thousands of rupees:—

	1880-1.	1890-1.	1901-2.	1903-4.
Land revenue . .	19,69	19,52	10,34	18,31
Total revenue . .	21,65	20,06	10,69	20,73

Of the Government villages, 88 are held on the *narvādāri* tenure. The peculiarity of this tenure is that it involves joint responsibility for the payment of the Government revenue. In *narvādāri* villages the *pātidārs* or sharers belong to the Kunbī caste, and on account of being *narvādārs* hold a high position among their fellows, being the descendants of the old proprietary cultivators. This tenure has been preserved by Act V of 1862 of the Bombay Government, but the land tax is levied at survey rates on the whole arable land. The villages on the banks of the river Mahī held on the *mehwāsi* tenure pay their revenue in a lump sum. A clan of Musalmān yeomen, known as the Māliks, have for nearly 400 years held 27 villages on a special tenure.

Municipalities and local boards.

The District contains 10 municipalities: namely, KAIRA, KAPADVANJ, MEHMADĀBĀD, NADIĀD, DĀKOR, BORSAD, ANAND, UMRETH, OD, and MAHUDHA. The District board was established in 1863, and there are 7 *tāluka* boards. The total expenditure of all these boards in 1903-4 was $2\frac{1}{4}$ lakhs, of which half a lakh was spent on roads and buildings. The chief source of income is the land cess.

Police and jails.

The District Superintendent of police has the assistance of 2 inspectors and 10 chief constables. There are 12 police stations. The force in 1904 numbered 555 men, working under 133 head constables. Six mounted police under one *daffadār* were also maintained. There are 8 subsidiary jails in the

District, with accommodation for 187 prisoners. The daily average prison population in 1904 was 36, of whom 2 were females.

Kaira stands fourth among the Districts of the Presidency in the literacy of its population, of whom 9·9 per cent. (17·9 males and 0·9 females) were able to read and write in 1901. In 1855–6 there were only 7 schools, attended by 1,036 pupils; by 1876–7 the number of schools had risen to 189 and the number of pupils to 14,720. In 1881 there were 205 schools with 16,107 pupils, who increased to 27,261 by 1891, and numbered 27,911 in 1901. In 1903–4 the District contained 365 schools, of which 84 were private, attended by 17,474 pupils, including 2,581 girls. Besides one high school, there were 14 middle and 266 primary schools. Of the 281 public institutions, one is managed by the Educational department, and 246 by local or municipal boards, while 30 are aided and 4 unaided. The total expenditure on education in 1903–4 was Rs. 1,85,000, of which Rs. 23,000 was derived from fees. Of the total, 79 per cent. was devoted to primary schools. Education.

In 1904 the District had one hospital and 8 dispensaries, with accommodation for 94 in-patients. The number of patients treated in 1904 was 110,069, including 1,122 in-patients; and 3,675 operations were performed. The expenditure was Rs. 21,000, of which Rs. 15,000 was met from Local and municipal funds. The Irish Presbyterian and Salvation Army Missions have each opened a dispensary at Anand, to which hospitals are shortly to be added. Hospitals and dispensaries.

The number of persons successfully vaccinated in 1903–4 was 17,000, representing a proportion of 24 per 1,000, which is slightly below the average for the Presidency. Vaccination.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. iii, Kaira and Pānch Mahāls (1879).]

Kapadvanj Tāluka.—Northern *tāluka* of Kaira District, Bombay, lying between 22° 52′ and 23° 7′ N. and 72° 50′ and 73° 19′ E., with an area of 279 square miles. The *tāluka* is in shape an oblong, 15 miles long and 30 miles broad, and contains one town, KAPADVANJ (population, 15,405), the head-quarters, and 87 villages. The population in 1901 was 75,258, compared with 101,527 in 1891. The density is only 270 persons per square mile, the District average being 449. The land revenue and cesses in 1903–4 amounted to 1·8 lakhs. Towards the south and west, Kapadvanj is a rich and well-cultivated plain clothed with trees. The Mohar and the Vātrak flow through it, but these streams are of little use for irrigation, being highly

charged with soda. The water-supply generally is scanty. *Bājra*, rice, *jowār*, and maize are the staple crops.

Mehmadābād Tāluka.—North-western *tāluka* of Kaira District, Bombay, lying between 22° 44′ and 22° 55′ N. and 72° 36′ and 72° 57′ E., with an area of 171 square miles. It contains two towns, MEHMADĀBĀD (population, 8,166), the head-quarters, and KAIRA (10,392), the District head-quarters; and 66 villages. The population in 1901 was 75,926, compared with 92,367 in 1891. The density, 444 persons per square mile, is almost equal to the District average. The land revenue and cesses in 1903–4 amounted to nearly 2·4 lakhs. The *tāluka* consists of a rich level plain, mostly open and thinly wooded. The land is poor, light, and sandy, but a portion is suited for rice cultivation. The Meshvo and Vātrak are shallow streams running south-west.

Thāsra.—North-eastern *tāluka* of Kaira District, Bombay, lying between 22° 38′ and 22° 58′ N. and 73° 3′ and 73° 23′ E., with an area of 257 square miles. It contains one town, DĀKOR (population, 9,498), and 96 villages. The population in 1901 was 73,980, compared with 75,622 in 1891. The density, 288 persons per square mile, is much below the District average. The head-quarters are at Thāsra. The land revenue and cesses in 1903–4 amounted to more than 2·1 lakhs. To the north and north-west the upland is bare of trees and poorly tilled. Towards the south the plain, broken only by the deep-cut channel of the Shedhi, is rich and well-wooded. The water-supply is scanty.

Mātar.—Western *tāluka* of Kaira District, Bombay, lying between 22° 26′ and 22° 50′ N. and 72° 30′ and 72° 47′ E., with an area of 216 square miles. Besides the main portion, some isolated villages lie separated from the rest by belts of Baroda and Cambay territory. The *tāluka* contains one town, Mātar (population, 4,001), the head-quarters; and 81 villages. The population in 1901 was 61,522, compared with 79,285 in 1891. The density, 285 persons per square mile, is much below the District average. The land revenue and cesses in 1903–4 amounted to more than 3 lakhs. The country lacks natural drainage, so that the climate is malarious during the rains. Rice lands are found in many parts.

Nadiād Tāluka.—Central *tāluka* of Kaira District, Bombay, lying between 22° 35′ and 22° 53′ N. and 72° 46′ and 73° 5′ E., with an area of 224 square miles. It contains two towns, NADIĀD (population, 31,435), the head-quarters, and MAHUDHA (8,544); and 91 villages, including CHAKLĀSI

(7,340). The population in 1901 was 148,452, compared with 171,084 in 1891. The density, 663 persons per square mile, is much above the District average. The land revenue and cesses in 1903–4 amounted to more than 4·3 lakhs. Well-grown groves of fruit and timber trees, highly tilled fields girt with hedges, and large substantially built villages, prove the *tāluka* to be one of the richest parts of Gujarāt.

Anand Tāluka.—Central *tāluka* of Kaira District, Bombay, lying between 22° 26′ and 22° 44′ N. and 72° 52′ and 73° 13′ E., with an area of 244 square miles. It contains three towns, UMRETH (population, 15,549), OD (6,072), and ANAND (10,010), the head-quarters; and 85 villages, including KARAMSAD (5,105), NĀPĀD (5,053), and SĀRSA (5,113). The population in 1901 was 143,305, compared with 169,766 in 1891. The density is 587 persons per square mile. The land revenue and cesses in 1903–4 amounted to more than 4·8 lakhs. Except towards the east, where the land is bare of trees, uneven, and seamed with deep ravines, the whole is a flat rich plain of light soil, well tilled and richly wooded. The water-supply is scanty.

Borsad Tāluka.—Southern *tāluka* of Kaira District, Bombay, lying between 22° 14′ and 22° 33′ N. and 72° 39′ and 73° 5′ E., with an area of 204 square miles. It contains one town, BORSAD (population, 13,001), the head-quarters; and 92 villages. The population in 1901 was 137,889, compared with 162,143 in 1891. It is the most thickly populated *tāluka* in the District, with a density of 673 persons per square mile. The land revenue and cesses in 1903–4 amounted to nearly 4·2 lakhs. Owing to its intersection by Baroda and Cambay territory, the *tāluka* is very broken and irregular in shape. The Mahī is the only river. It flows along the southern boundary, and is throughout the whole distance tidal; but the shallowness of its channel, its shifting sand-banks, and the force of its tidal wave, make it useless for boats. Except in the south, along the banks of the Mahī, the whole is a highly cultivated plain sloping gently westwards, intersected by rich hedgerows and adorned with groves of magnificent trees. The water-supply is good.

Adas (or Arras).—A plain in Kaira District, Bombay, situated in 22° 29′ N. and 73° 2′ E., between Anand and the Mahī river, which has, in modern times, been the scene of three battles. At the first of these (1723) Rustam Alī, the imperial governor of Surat, was, through the treachery of Pilājī Gaikwār, defeated and slain by Hāmid Khān, deputy of Nizām-ul-mulk. At the second (February, 1775) Raghunāth Rao Peshwā was defeated by the Marāthā confederation. At the

third, a few months later (May 18, 1775), the Marāthā army was, after a severe struggle, defeated by a British detachment under the command of Colonel Keating. Of the third battle of Adas, James Forbes, who was present, gives the following details: The enemy's cannon silenced, and their cavalry dispersed by the British artillery, a party was sent forward to take their guns. While a strong force of cavalry opposed this party's advance, a body of Marāthā troops, professing to be partisans of Raghunāth Rao, was allowed to pass between the advanced party and the main British line. Attacked both in front and rear, the forward party resisted bravely till the grenadiers, facing to the right-about to change ground, by some mistake began to retreat. The rest followed, and at the same time a tumbril of shells blowing up added to the confusion. The men retreated at first in order, but getting broken at a high hedge, fled to the main line. The enemy followed, but were met by so steady a fire of grape-shot and shell that they were driven off the ground. The British were left masters of the field, and a gun that had fallen into the enemy's hands was retaken. The engagement lasted for four hours. Victory was dearly bought. Of fifteen British officers in the advanced division, seven were killed and four wounded. Eighty Europeans, many native officers, and 200 men, were killed or missing.

Anand Town.—Chief town of the *tāluka* of the same name in Kaira District, Bombay, situated in 22° 33′ N. and 72° 58′ E. Population (1901), 10,010. It is a junction on the Bombay, Baroda, and Central India Railway, 40 miles south of Ahmadābād, where the Godhra-Ratlām and the Petlād Railways join the main line. The municipality was established in 1889. The receipts during the decade ending 1901 averaged Rs. 6,600. In 1903–4 the income was Rs. 6,900. There are branches of the Irish Presbyterian, Roman Catholic, and Salvation Army missions in Anand; and the town has 2 ginning factories, 3 dispensaries, and 5 schools (4 for boys and one for girls), attended by 612 male and 209 female pupils. These include 2 English middle schools with 66 boys. The Salvation Army maintains a well-equipped hospital, which is open to all classes.

Borsad Town.—Head-quarters of the *tāluka* of the same name in Kaira District, Bombay, situated in 22° 25′ N. and 72° 54′ E. Population (1901), 13,001. The town is protected by a double line of fortifications, the outer of which is in disrepair, the inner in fair preservation. These fortifications are modern, having been constructed by Rangojī, a Marāthā leader, who

fixed his head-quarters here in 1741. The fort was constantly the scene of fighting till 1748, when, after a siege of five months, the Gaikwār captured the town and made Rangojī prisoner. Borsad is the seat of a Presbyterian mission. Since 1889 it has been a municipal town with an average income during the decade ending 1901 of Rs. 8,000. In 1903–4 the income was Rs. 12,000, including grants for education. A well, built in 1497, with 7 storeys and 13 arches, is of archaeological interest. The town contains a Sub-Judge's court, a dispensary, and 9 schools (6 for boys and 3 for girls) with 783 and 298 pupils respectively, including an English mission school, belonging to the Irish Presbyterians, with 64 pupils.

Chaklāsi.—Town in the Nadiād *tāluka* of Kaira District, Bombay, situated in 22° 39′ N. and 72° 57′ E. Population (1901), 7,340. In 1898 an outbreak occurred here among persons of the Dharāla caste, who had been led to believe that the British Government had ceased to exist. The police were at first repulsed, but eventually arrested the ringleaders. The town contains a boys' school with 303 pupils.

Dākor.—Place of pilgrimage for Hindus, in the Thāsra *tāluka* of Kaira District, Bombay, situated in 22° 45′ N. and 73° 11′ E., on the Godhra-Ratlām branch of the Bombay, Baroda, and Central India Railway, 9 miles north-east of Anand. Population (1901), 9,498. The chief object of interest at Dākor is the temple of Ranchodjī or Krishna. The image of the deity was brought from Dwārka by Bodhāno, a Rājput. There are monthly meetings, but the largest gatherings take place about the full moon in October–November, when as many as 100,000 pilgrims assemble. The municipality was established in 1864. The receipts during the decade ending 1901 averaged Rs. 19,000. In 1903–4 the income was Rs. 17,000, derived chiefly from house and pilgrim taxes. The town contains a dispensary and five schools (four for boys, including an English middle school, and one for girls), attended by 364 and 74 pupils respectively.

Kaira Town (*Kheda*).—Head-quarters of Kaira District, Bombay, situated in 22° 45′ N. and 72° 41′ E., 7 miles south-west of Mehmadābād station on the Bombay, Baroda, and Central India Railway, and 20 miles south-west of Ahmadābād. Population (1901), 10,392. Kaira is a very ancient place, having a legendary connexion with the Mahābhārata, and is proved by the evidence of copperplate grants to have existed as early as the fifth century A.D. Early in the eighteenth century it passed to the Bābi family, with whom it remained

till 1753, when it was taken by the Marāthās under Dāmājī Gaikwār. It was finally handed over to the British by Anand Rao Gaikwār in 1803. Its frontier position rendered Kaira important; and a force of infantry, cavalry, and artillery was stationed there until the transfer, in 1830, of the frontier station to Deesa. The climate is said to have improved of late years. Earthquake shocks were felt in 1860 and 1864. The courthouse is a handsome building with Greek pillars. Near it is a part of the old jail, in 1814 the scene of a riot in which the prisoners rose, and which was only suppressed with a loss of 19 killed and 12 wounded. The municipality was established in 1857, and its income during the decade ending 1901 averaged Rs. 15,000. In 1903-4 the income was Rs. 18,000, chiefly from a house and land tax. Besides the Government revenue offices, the town contains a Sub-Judge's court, a civil hospital, and 6 schools (5 for boys and one for girls), attended by 543 male and 82 female pupils. The boys' schools include an English school with 92 pupils.

Kapadvanj Town.—Head-quarters of the *tāluka* of the same name in Kaira District, Bombay, situated in 23° 1′ N. and 73° 5′ E. Population (1901), 15,405. Near the walls, which protect the place, are the ruins of an ancient town, the scene of some hard-fought battles during the Marāthā ascendancy. It was exchanged for Bijāpur in 1817. Kapadvanj derives its importance from lying on one of the main trade routes between Central India and the coast. The principal objects of interest in the town are a fine reservoir with a well in the centre, and an arch in the Chālukya (1000-1300) style of architecture. A sacred pool, with traditional healing qualities, is inside the well. South of the pool is an underground temple of Mahādeo, which was discovered in A.D. 1044, if popular tradition is to be relied on. The idol appears to have been placed underground to protect it from the iconoclastic zeal of early Musalmān invaders. Of modern buildings that of most note is a Jain temple, the interior of which is richly ornamented with marble pillars, and has a marble pavement inlaid with delicacy and taste. The municipality was established in 1863. The average receipts for the decade ending 1901 were Rs. 15,000; and in 1903-4 the income was Rs. 16,000, chiefly derived from a house and land tax. Precious stones, such as agate and onyx, are found in large quantities in the bed of the Mohar, a rocky stream half a mile north of the town. Manufactures are soap, glass, and leathern butter-jars. The most important article of trade is grain. Besides supplying

a considerable local demand, Kapadvanj goods are exported to the Pānch Mahāls, Bālāsinor territory, and Central India. The town contains a Sub-Judge's court, a dispensary, and 11 schools (9 for boys, including an English school with 52 pupils, and 2 for girls), which are attended by 804 and 258 pupils respectively.

Karamsad.—*Pātidār* village in the Anand *tāluka* of Kaira District, Bombay, situated in 22° 33′ N. and 72° 54′ E., and one of the thirteen *kulin* villages of the District. Population (1901), 5,105. It contains a middle school with 38 pupils.

Mahudha.—Town in the Nadiād *tāluka* of Kaira District, Bombay, situated in 22° 49′ N. and 72° 56′ E. Population (1901), 8,544. Mahudha is said to have been founded by a Hindu prince named Māndhāta about two thousand years ago. The municipality was established in 1889, the average income during the decade ending 1901 being Rs. 8,000. In 1903–4 the income was Rs. 8,300. The town contains a dispensary and four schools (three, including an English school, for boys and one for girls), attended by 377 male and 70 female pupils respectively.

Mehmadābād Town (*Mahmūdābād*).—Head-quarters of the *tāluka* of the same name in Kaira District, Bombay, situated in 22° 50′ N. and 72° 46′ E., on the Bombay, Baroda, and Central India Railway, 17 miles south of Ahmadābād. Population (1901), 8,166. It was founded in 1479 by Mahmūd Begara, who ruled in Gujarāt from 1459 to 1511, and improved by Mahmūd III (1537–54), who built a deer-park with an enclosure 6 miles long. At each corner of the park was a palace with gilded walls and roof. On the right-hand side of the gates leading to the palaces were placed bazars. Of the existing objects of interest, the most notable are two tombs in the village of Sojāle, about 2 miles to the north-east of the town, built in 1484 in honour of Mubārak Saiyid, one of the ministers of Mahmūd Begara, and of his wife's brothers. Mehmadābād has been a municipality since 1863, with an average income of Rs. 9,500 during the decade ending 1901. In 1903–4 the income was Rs. 9,600. The town contains a dispensary and four schools, three (including an English middle school with 57 pupils) for boys and one for girls, attended by 427 and 102 pupils respectively.

Nadiād Town.—Head-quarters of the *tāluka* of the same name in Kaira District, Bombay, situated in 22° 42′ N. and 72° 52′ E., on the Bombay, Baroda, and Central India Railway, 29 miles south-east of Ahmadābād. Population (1901), 31,435,

Hindus numbering 26,239, Muhammadans 4,468, and 'others' 728. At the beginning of the seventeenth century Nadiād was a large town with cotton and indigo manufactures, and in 1775 was described as one of the prettiest cities of Gujarāt, flanked by nine strong gates and a dry moat. In that year Raghunāth Rao Peshwā levied upon it a fine of Rs. 60,000 for its adhesion to the cause of Fateh Singh Gaikwār. In 1838 it was said to be a thriving place, carrying on a considerable trade with Mālwā. Nadiād has been a municipality since 1866, with an average income of Rs. 51,000 during the decade ending 1901. In 1903–4 the income was Rs. 44,000, derived chiefly from octroi (Rs. 19,000) and house and land tax (Rs. 11,000). The town is the centre of an extensive trade in tobacco and *ghī*, and contains a cotton mill, a brass foundry, and a sugar factory. There is also a model experimental farm. Nadiād has a high school with 287 pupils, and 2 middle schools with 142 pupils. It also contains 10 vernacular schools—8 for boys, including one conducted by the Methodist Episcopal Mission, and 2 for girls—attended by 1,676 and 311 pupils respectively. An industrial class is attached to the Methodist school. A Sub-Judge's court and a dispensary are located here. The town also contains a handsome public hall and library, known as the Dahi Lakshmi Library.

Nāpād.—Village in the Anand *tāluka* of Kaira District, Bombay, situated in 22° 29′ N. and 72° 59′ E., 14 miles west of the Vāsad railway station. Population (1901), 5,053. Till 1869 Nāpād was a *māmlatdār's* station. North of the village is a handsome pond, 500 yards in circuit, said to have been built about four hundred years ago by a Pathān named Taze Khān Narpāli, governor of Petlād. It is enclosed by brick walls, and is octagonal in shape, a triangular flight of steps within each side leading to the water. On the west is an Idgāh, or place for Id prayers, with a flight of granite steps leading to the lake. Along the bank beyond the Idgāh are traces of terraces and other buildings. The well, to the east of the village, also the work of Taze Khān Narpāli, was repaired in 1838 by a Baroda merchant.

Od.—Town in the Anand *tāluka* of Kaira District, Bombay, situated in 22° 37′ N. and 73° 7′ E. Population (1901), 6,072. It has been a municipality since 1889. The income during the decade ending 1901 averaged Rs. 5,000. In 1903–4 the income was Rs. 4,980. The town contains three vernacular schools, two for boys and one for girls, attended by 262 and 51 pupils respectively.

Sarsa.—Town in the Anand *tāluka* of Kaira District, Bombay, situated in 22° 33′ N. and 73° 4′ E. Population (1901), 5,113. Sarsa contains two old wells dating from 1044, and a temple of Vaijanāth built in 1156, the supposed year of the foundation of the town. There are two schools, one for boys and one for girls, attended by 230 and 74 pupils respectively.

Umreth.—Town in the Anand *tāluka* of Kaira District, Bombay, situated in 22° 42′ N. and 73° 7′ E., on the Godhra branch of the Bombay, Baroda, and Central India Railway, 14 miles north-east of Anand and 5 miles south-by-west of Dākor. Population (1901), 15,549. It is one of the most populous and wealthy towns in the District. Near the town is a step-well estimated to be nearly five hundred years old. It has five storeys and 109 steps, and is ascribed to Sidhrāj, king of Anhilvāda. The municipality was established in 1889. The income during the decade ending 1901 averaged Rs. 12,000. In 1903–4 the income was Rs. 14,000. The town has a cotton-ginning factory, a Sub-Judge's court, a dispensary, and 2 English middle schools with 195 pupils. It also contains 5 vernacular schools, 4 for boys and one for girls, attended by 458 and 110 pupils respectively.

Pānch Mahāls (or 'Five Subdivisions').—District in the Northern Division of the Bombay Presidency, lying between 22° 15′ and 23° 11′ N. and 73° 22′ and 74° 29′ E., with an area of 1,606 square miles. It consists of two separate parts, divided by a broad strip of the Bāriya State of the Rewā Kāntha Agency. Of these, the western portion is bounded on the north by the States of Lūnāvāda, Sunth, and Sanjeli; on the east by Bāriya State; on the south by Baroda State; and on the west by Baroda State, the Pāndu Mehwās, and the Mahī river, which separates it from Kaira District. The eastern portion is bounded on the north by the States of Chilkāri and Kushālgarh; on the east by Western Mālwā and the river Anās; on the south by Western Mālwā; and on the west by the States of Sunth, Sanjeli, and Bāriya. Boundaries, configuration, and hill and river systems.

The two sections of the District differ considerably in appearance. That to the south-west (except a hilly area covered with dense forest, comprising the Pāvāgarh hill) is a level tract of rich soil; while the other portion is much more rugged and includes many varieties of soil, from fertile twice-cropped valleys to barren stony hills. In some of the western villages, the careful tillage, the well-grown trees, and the deep sandy lanes bordered by high hedges overgrown with tangled creepers

recall the wealthy tracts of Kaira. In other parts are wide stretches of woodland and forest, or bare and fantastic ridges of hills without a sign of tillage or population.

Though there are many streams and watercourses, the District has no large river, except the Mahī, which touches it on the north-west. The Anās and Pānam occasionally dry up in the hot season. The District is, however, sufficiently supplied with water. The Orwāda lake near the Pānam river is said never to have been dry, and to have a pillar in the centre visible only in times of extreme drought.

PĀVĀGARH in the south-west corner of the District is the only mountain of any size. It rises 2,500 feet from the plain in almost sheer precipices, and has a rugged and picturesque outline on the summit, which is strongly fortified, and was formerly a place of much consequence.

Geology. Except in its south-west corner, no detailed inquiry into the geology of the Pānch Mahāls has been made. In the eastern division, though black and clay soils occur, the surface is chiefly a somewhat shallow light-red soil much mixed with gravel. The rocks are believed to be mainly metamorphic with a few trap outliers. In the western division, near Godhra, all the surface rocks are metamorphic, and in other places metamorphic rocks alternate with beds of quartzite sandstone. The geological survey of the south-west of the District shows two chief geological features: the great volcanic mass of Pāvāgarh, and a group of semi-metamorphic beds, chiefly quartzite or quartzite sandstone, known as the Chāmpāner beds. Pāvāgarh is an isolated outlier of the Deccan trap, all that remains of a range of basaltic lavas and ash-beds that stretched south to the Rājpīpla hills. Unlike those to the south-east, the Pāvāgarh traps lie perfectly flat. Their mineral character is in many parts peculiar. Of the numerous terraces below the upper flat of the hill, some are ordinary basaltic lava-flows; but many are of a light purple clay-rock rare in other places. Somewhat cherty in appearance and containing small crystals of glassy felspar, this rock is sometimes mottled purple and grey. It is almost always distinctly marked by planes of lamination parallel to the stratification, sometimes so finely as to be more like an ordinary shale than a volcanic rock. Similar beds are very rare in the Deccan trap, and no other instance of their development on so large a scale has been observed in Western India. The group of quartzite sandstone beds has been traced for about 20 miles east of Pāvāgarh and for 7 or 8 miles south of Chāmpāner.

The other beds are mostly slates, conglomerates, and limestones, ferruginous bands occasionally occurring. There are hot springs 10 miles west of Godhra at Tuva, where Kolīs and Bhīls assemble in March to worship Mahādeo.

Botany. The most prominent trees of the District are the mango, *mahuā*, tamarind, *rāyan* (*Mimusops hexandra*), and banyan, which give the country a park-like appearance. In addition to the banyan or *vad* (*Ficus bengalensis*), other members of the fig family are met with, such as the *pipri* (*Ficus Tsiela*), the *umbar* or *gular* (*F. glomerata*, and the *pīpal* (*F. religiosa*). In the Kālol *tāluka* rows of palmyra palms, many of them encircled by a *pīpal*, at once attract notice. Teak and *khākra* (*Butea frondosa*) are common. The gum of the latter is gathered by the Naikdās, who manufacture rope from its roots. Among other common trees are the *samra* (*Prosopis spicigera*), *karanj* (*Pongamia glabra*), *bor* (*Zizyphus Jujuba*,) *aduso* (*Ailanthus excelsa*), *simal* (*Bombax malabaricum*), and *shamla* (*Eriodendron anfractuosum*). The commonest shrubs are the *onkla* (*Alangium Lamarckii*) and the *sitāphal* or custard-apple (*Anona squamosa*). Of climbing shrubs, the *kavaj* (*Mucunna pruriens*), *gavria* (*Canavalia ensiformis*), and *Ipomoea sepiaria* with its pale pink flowers are of frequent occurrence. The lotus is found in the marshes. Among *Labiatae* and *Amarantaceae* the most noticeable are *Leucas linifolia*, *L. Cephalotes*, *Celosia argentea*, and *Achyranthes aspera*. The milk-bush (*Euphorbia Tirucalli*) and prickly-pear (*Opuntia nigricans*) are common in hedges.

Fauna. When in 1861 the District was taken over by the British Government, big game of all sorts and many kinds of deer abounded. Wild elephants were common three centuries ago, and fifty years back tigers were numerous. The number is now greatly reduced. Snakes are common throughout the District, especially in and near Godhra.

Climate and temperature. In healthiness the climate varies greatly. The well-tilled parts, Kālol in the west and Dohad in the east, would seem to be free from any special form of sickness, and to be healthy for new-comers as well as for the local population. Godhra, surrounded by large areas of forest and waste, though fairly healthy for residents, is a trying climate for strangers. The hot and rainy seasons have a depressing effect on Europeans. The mean temperature is 83°.

Rainfall. In the eastern division the rains are late in their arrival. Hālol *petha* has the heaviest average fall (41 inches); the lowest is in Dohad (30). The average rainfall at Godhra town

is 38 inches, mainly received during the south-west monsoon. The rainfall is generally heavier than in other Gujarāt Districts, owing to the proximity of the Rājpīpla hills.

History. The history of the Pānch Mahāls is the history of the city of CHĀMPĀNER, now a heap of ruins. During the Hindu period Chāmpāner, founded about the end of the eighth century, was a stronghold of the Anhilvāda kings and of the Tuār dynasty. The Chauhāns followed the Tuārs, and retained possession of it and of the surrounding country until the appearance of the Muhammadans under Mahmūd Begara in 1484. From this time until 1536 Chāmpāner remained the political capital of Gujarāt. In 1535 Humāyūn pillaged the city, and in the following year the court and capital were transferred to Ahmadābād. The Marāthās under Sindhia overran and annexed the District in the middle of the eighteenth century; and it was not until 1853 that the administration was transferred to the British. In 1861 ownership was also transferred, and Sindhia received compensation for the Pānch Mahāls in lands near Jhānsi. At this date the District was placed under the Political Agent for Rewā Kāntha. In 1864 the revenue was made payable through Kaira; and in 1877 the Pānch Mahāls were formed into a distinct Collectorate. Since 1853 the peace has been twice disturbed—once in 1858 by an inroad of mutineers, under Tāntiā Topī; and a second time in 1868, when the Naikdās (said to be the Muhammadan descendants of the population of Chāmpāner) rose, but were dispersed by Captain Macleod and a detachment of the Poona Horse. The chief criminal, Joria, was hanged.

Archaeology. There are few remains of archaeological interest in the District. On the hill of Pāvāgarh are the ruins of the Sāt Mahal or 'seven-storeyed palace,' from which the ladies of the *zanāna* used to witness the pleasures of the chase; the Māchi Haveli or 'terrace palace,' the Makai Kothār or 'maize storehouse,' and the Navlākh Kothār or 'nine-lakh granaries.' The summit is occupied by a famous shrine of Kālika Māta; and there are some mediaeval temples on the hill. The Jāma Masjid of Chāmpāner is known for its massive grandeur and perfect finish (1414), and some finely decorated mosques and tombs are buried in the adjacent jungle.

The people. The District contains 4 towns and 689 villages. At the last four enumerations the population was: (1872) 240,743, (1881) 255,479, (1891) 313,417, and (1901) 261,020. The decrease in the last decade was due to the famine of 1900,

which pressed with great severity on the Bhīls and other wild tribes of the District. The three principal towns in the District are: GODHRA, the head-quarters, DOHAD, and JHĀLOD. The *tāluka* areas and population are as follows:—

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Dohad	607	1	114	58,887	150	− 14	3,096
" Jhālod *petha*		1	98	31,931		− 35	1,307
Godhra	585	1	225	96,406	165	− 10	5,680
Kālol	414	1	80	39,964	178	− 15	3,255
" Hālol *petha*		...	172	33,832		− 17	1,482
District total	1,606	4	689	261,020	163	− 17	14,820

Of the total population, 210,521, or 80 per cent., are Hindus, and 21,349, or 5 per cent., Muhammadans. Gujarātī is spoken by 97 per cent. of the inhabitants.

Castes and occupations.

Among the Hindus the most numerous castes are Kolīs (49,000) and Patelias (10,000). The majority of the aboriginal tribes are Bhīls, who number 98,000, or 37 per cent. of the total population; other aborigines number 8,000, nearly all Naikdās. Until recent years the aboriginal tribes were turbulent, and much addicted to thieving and drunkenness. The Bhīls, as a rule, now cultivate the same fields continuously, although many still practise nomadic tillage on patches of forest land, which they abandon after a year or two. Formerly, they never entered a town except to plunder, but now they crowd the streets, selling grain, wood, and grass. The Naikdās are found only in the wildest parts, chiefly in Hālol, and are employed as labourers and woodcutters; a few practise nomadic tillage. The Bhīls and Naikdās do not live in villages, but each family has a separate dwelling; and they are still prone to move from place to place for superstitious reasons. The agricultural population of the District is being steadily strengthened by an immigration of Kunbīs from neighbouring tracts. These now amount to 2·4 per cent. of the whole, and are chiefly found in the western portion. The Muhammadan population consists largely of the trading Bohrās and a caste of oilmen known as Ghānchis (7,000). These men, as their name implies, are generally oil-pressers; but in former times they were chiefly employed as carriers of merchandise between Mālwā and the coast. The changes that have followed the introduction of railways have in some respects reduced the prosperity of these

professional carriers, and the Ghānchis complain that their trade is gone. Much of the best cultivated land in the neighbourhood of Godhra and Dohad is in their hands; and, though turbulent on occasions, they are, as a class, so intelligent, pushing, and thrifty, that there seems little reason to doubt that before long they will be able to take advantage of some opening for profitable employment.

The District is an agricultural one, more than 71 per cent. of the people depending on the land. Of the rest, 11 per cent. are supported by industries and 9 per cent. by general labour. Trade is in the hands of the Baniās (7,000) and Bohrās (5,000), the latter monopolizing the very considerable timber business. The Baniās are well represented in all villages of any size.

Christian missions.

In 1872 there were only 24 Christians, representing European officers and their servants. According to the Census of 1901 there were 489 native Christians, mostly in the Dohad *tāluka* (329); and 17 Europeans and Eurasians. The Irish Presbyterian Mission has stations at Dohad and Jhālod, and the American Methodist Episcopal Mission works at Godhra. The Salvation Army has been working in Dohad and Jhālod since 1890. The Irish Presbyterian Mission maintains altogether 9 schools, of which 4 in Jhālod are for Bhīls, 4 orphanages, and 2 agricultural settlements at Dohad and Rājespur, on which the boys of the schools are settled after two years' training. The American Mission maintains a girls' school and 10 village schools. Marriages according to Christian rites have been solemnized between 19 couples of Bhīl converts.

General agricultural conditions.

The soil of the District differs considerably from that of Western Gujarāt. There are great varieties of soil: alluvial in the north-west of Godhra; *māl*, a dull black soil, to the south of Godhra; and beyond that a large tract of light *gorādu* land. The soil of the eastern division is both light and black, and, owing to the abundance of water, is very productive. An area of about 40,000 acres is capable of bearing two crops in the year—maize followed by gram or wheat—without irrigation.

Chief agricultural statistics and principal crops.

The tenures of the District are *ryotwāri* (41 per cent.), *tālukdāri* (25 per cent.), *mehwāsi* (6 per cent.), and leasehold (9 per cent.) About 18 per cent. consists of *inām* and *jāgīr* estates. The chief statistics of cultivation in 1903-4 are shown in the table on the next page, in square miles.

Maize is the staple food-crop of the District (161 square miles), and is especially important in the Dohad *tāluka.*

Next in importance is *bājra* (81), grown chiefly in Kālol and Godhra. The other crops largely cultivated are rice (67), gram (63), and sesamum (65). Gram is mainly produced in Dohad and Godhra. Rice is of inferior quality. *Tur* and castor are also grown, as well as small quantities of sugar-cane in Godhra and Kālol, and *til* (sesamum) is sown in partly cleared or new fields. Since 1902 cotton has been raised in Kālol and Hālol. During the decade ending 1903–4, 9·5 lakhs was advanced to cultivators for improvement of land and the purchase of seed and cattle, of which 4·6 lakhs was lent in 1900–1 and nearly 2 lakhs in 1901–2.

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Dohad . . .	607	341	1¾	101	114
Godhra . .	585	330	1	67	139
Kālol . . .	414	260	¼	32	78
Total	1,606*	931	3	200	331

* The area for which statistics are not available is 210 acres.

Little care is taken in breeding cattle. The bullocks are poor, small, and weak, but hardy and active, and can work on the poorest fare. Ponies are small and poor, the result of careless breeding and bad keep. Goats are fairly plentiful. Sheep are few and are confined to Dohad; they are of poor breed. Cattle, ponies, &c.

The fields are watered from rivers, tanks, and wells, the total area irrigated in 1903–4 being 3 square miles. Wells supplied 1,660 acres, tanks 125, a Government canal 12, and other sources 3 acres. There are altogether 2,582 wells, 3 tanks, and one Government work, the Muvalia tank. From rivers water is drawn by means of rough wooden lever-lifts (*dhekudis*), costing about Rs. 3 to set up. As springs are found close to the surface, wells are seldom sunk deeper than from 15 to 30 feet. Irrigation.

The Pānch Mahāls form the only District in Gujarāt with a large forest area. Till 1860 the produce of these forests was in little demand, and much damage had been done to them by previous neglect. There remains in consequence little timber of any size. In 1866 the construction of the Bombay, Baroda, and Central India Railway raised the value of timber. Efforts were then made to introduce a more efficient system of management. The District possesses 331 square miles of forest, and the forest revenue amounted in 1903–4 to 1½ lakhs. The timber Forests.

and firewood are chiefly exported, about 40 per cent. of the former and 20 per cent. of the latter being consumed locally. Except the flowers of the *mahuā*, the minor produce is of little consequence. The flowers are gathered for export, while the tree also supplies food and drink to the Bhīls, and furnishes excellent timber. The *rayan* grows in beautiful clusters, and its fruit forms the chief food of the poorest classes.

Mines and minerals. Compared with other Gujarāt Districts, the Pānch Mahāls are rich in minerals. The hills contain iron, lead, manganese, and mica. Iron ore is found in the village of Pālanpur in the Kālol *tāluka* and near Jāmbughoda and Shivrājpur in Hālol, but is not worked. Mining for manganese on a large scale is now being carried on in Hālol by a European firm. Lead ore occurs in Nārukot, but is too poor in silver to repay the cost of working. Talc is quarried near the Nārukot hills. A useful sandstone for paving is found at Bājarwāda, and the common Godhra granite, a very durable stone, is worked 9 miles from Pālī station.

Commerce. The through trade of the District was once very flourishing, especially after the reduction of transit duties; but the opening of the Mālwā line of the Rājputāna-Mālwā State Railway into Central India from Khandwā interfered for a time with this traffic. The recently constructed railway from Godhra to Ratlām has now revived it. The chief exports to Gujarāt are grain, *mahuā* flowers, timber, and oilseeds; the chief imports from Gujarāt are tobacco, salt, coco-nuts, hardware, and piece-goods. Timber is the chief article of export, and most of it comes from the Bāriya and Sanjeli forests. The only industry of any importance is the making of lac bracelets at Dohad. Dohad is also looked upon as a granary in time of necessity for Mālwā, Mewār, and Gujarāt.

Communications. Railways and roads. The Anand-Godhra branch of the Bombay, Baroda, and Central India Railway and the Godhra-Ratlām-Nagda Railway pass through the District from west to east, connecting Godhra with Anand on the west and Dohad on the east. The former traverses the District for 15 miles, the latter for 39 miles. A chord-line from Baroda to Godhra, which was opened in 1904, traverses the District for 17 miles. There are four main roads, one connecting Lūnāvāda with Godhra, while another runs from the railway at Sunth Road to the Sunth border. The old road running parallel to the railway line from Anand to Dohad is still maintained where it passes through this District, and a branch of it, metalled and bridged, connects Jhālod with the railway at Limkheda in Bāriya.

There is a bridged but unmetalled road from Godhra to Kālol and Hālol, and thence across to the Jāmbughoda frontier. A metalled road from Limbdi through Dohad to the Alirājpur frontier has recently been completed. The total length of roads in the District in 1903-4 was: metalled, 82 miles; unmetalled, 68 miles. Of the former, 45 miles of Provincial roads and 37 miles of local roads are maintained by the Public Works department. Avenues of trees are planted along 38 miles.

Famine. In 1845 the maize crop was destroyed by locusts. During the twenty years ending 1879 want of rain caused scarcity and distress on five occasions, 1853, 1857, 1861, 1864, and 1877. The District again suffered in 1899. Relief works were opened in September, 1899, and continued till October, 1902. The highest daily average relieved was: on works, 71,204 (July, 1900); and gratuitously, 75,188 (August). It is calculated that nearly 300 persons and over 200,000 cattle died from privation in 1899-1902. The cost of relief measures in this and the adjacent District of Kaira was over 88 lakhs. Remissions of land revenue amounting to over 35 lakhs were granted in the two Districts. Advances to agriculturists amounted to 8½ lakhs in the Pānch Mahāls alone.

In the Godhra and Kālol *tālukas* crops are occasionally injured by mildew, insects, or frost; and in 1903-4 the early crops suffered severely from locusts.

District subdivisions and staff. For purposes of administration the Pānch Mahāls form a non-regulation District under the charge of an officer styled the Collector, who is also Political Agent, Rewā Kāntha. The District is divided into two divisions, in charge of an Assistant and a Deputy-Collector respectively. There are three *tālukas*, DOHAD, GODHRA, and KĀLOL, and two *pethas* or petty subdivisions, Jhālod and Hālol.

Civil and criminal justice. For civil judicial purposes the District is included in the jurisdiction of the Judge of Ahmadābād, while since 1905 it has been part of the Broach Sessions Division. There are two Sub-Judges for civil work, at Dohad and Godhra, and eight officers to administer criminal justice. The commonest forms of crime are theft of cattle and housebreaking, in both of which the aboriginal tribes are proficient.

Land revenue administration. Before the management of the District was taken over by the British, the chief revenue contractor recovered the revenue under several systems. Villages in the hands of large landholders paid a lump sum fixed on an estimate of their probable revenue. Others were represented by their headmen, who

were responsible for an amount fixed on a rough estimate of what the village could afford to pay. Some villages were farmed in groups to sub-contractors on five-year leases, with yearly increasing rents. In other cases the division of crops and levy of a plough cess fixed by the revenue superintendent, or *desai*, varied according to the caste of the cultivator from Rs. 2 to Rs. 15 a plough, or, at the rate of 7 acres to a plough, from 4 annas to Rs. 2 an acre. When spice, sugar-cane, and other rich crops were grown, an extra cess was levied. In villages where a division of crops was in force the government share varied from a third to a half. When the British took over the management in 1853, the Government respected the position of the large landlords, *tālukdārs*, and *thākurs*, who were chiefly Kolīs owning estates varying from one village to forty or fifty. These villages were valued, and a certain proportion of the full assessment was fixed as revenue for a period of years. The alienations of Government villages were inquired into and settled on an equitable basis. The transit duties and other vexatious levies of the former government were abolished. On the transfer of the Pānch Mahāls from Sindhia in 1861, they were in the first instance placed under the Political Agent for Rewā Kāntha. In the same year the survey settlement of Hālol, Dohad, and Jhālod was carried out, to be followed in 1870 by the survey settlement of Godhra and Kālol. A resettlement of the District has been in progress since 1903. The original survey found that the cultivated area was 1·4 per cent. in excess of that recorded, and the settlement enhanced the total revenue from 1·87 to 2·02 lakhs. The present average assessment per acre of 'dry' land is R. 0–10–5 (maximum Rs. 2, minimum R. 0–14); of rice land, Rs. 2–3 (maximum Rs. 2–8, minimum R. 1); and of garden land, Rs. 2–12 (maximum Rs. 4-7, minimum Rs. 1–9).

Collections of land revenue and total revenue, which are still paid through Kaira, have been as follows, in thousands of rupees:—

	1890-1.	1900-1.	1903-4.
Land revenue . .	2,84	95	2,75
Total revenue . .	3,10	1,04	3,04

Municipalities and local boards.

Outside the municipalities of Godhra and Dohad, local affairs are managed by the District board and the three *tāluka* boards of Godhra, Kālol, and Dohad. The Local funds yielded in 1903–4 a revenue of Rs. 58,000, and the expen-

diture amounted to Rs. 68,000, of which about Rs. 15,000 was spent on roads and buildings and Rs. 6,000 on water-works. The chief source of income is the land cess.

Police and jails. The District Superintendent has the control of the police administration, assisted by 2 inspectors and 7 chief constables. There are 5 police stations. The force in 1904 numbered 504 men, working under 118 head constables, besides 8 mounted police under 2 *daffadārs*. There are 5 subsidiary jails and 3 lock-ups in the District, with accommodation for 73 prisoners. The daily average prison population in 1904 was 43.

Education. The Pānch Mahāls stand eighth among the Districts of the Presidency in the literacy of their population, of whom 5·7 per cent. (10·5 males and 0·8 females) were able to read and write in 1901. In 1855–6 there were only 7 schools attended by 327 pupils; by 1881 the number of schools had risen to 39 and of pupils to 2,794. In 1890–1 there were 6,499 pupils, and in 1900–1, 5,902. Private and public schools in 1903–4 numbered 124, attended by 5,628 pupils, including 1,071 girls. Of the 112 public institutions, one is managed by the Educational department, 96 by local boards, and 12 by municipalities, while three are unaided. These institutions include a high and middle school and 111 primary schools. The total expenditure on education in 1903–4 was Rs. 48,000, of which Rs. 5,000 was derived from fees. Of the total, 83 per cent. was devoted to primary schools.

Hospitals and dispensaries. In 1904 the District possessed 1 hospital and 5 dispensaries. The Dohad civil hospital, established in 1870, was transferred to Godhra many years ago. These institutions contain accommodation for 69 in-patients. The total treated in 1904 numbered 36,000, including 702 in-patients. The expenditure was Rs. 10,000, of which Rs. 2,800 was met from Local and Rs. 500 from municipal funds.

Vaccination. The number of persons successfully vaccinated in 1903–4 was 8,522, representing a proportion of 33 per 1,000, which is much above the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. iii (Kaira and Pānch Mahāls) (1879).]

Dohad Tāluka.—Eastern *tāluka* of Pānch Mahāls District, Bombay, including the petty subdivision (*petha*) of Jhālod, lying between 22° 38′ and 23° 11′ N. and 74° 2′ and 74° 29′ E., with an area of 607 square miles. It contains 2 towns, DOHAD (population, 13,990), its head-quarters, and JHĀLOD (5,917); and 212 villages. The population in 1901 was 90,818, compared with 117,999 in 1891, the decrease,

which occurred chiefly in Jhālod, being due to famine. The density, 150 persons per square mile, is slightly below the District average. The land revenue and cesses in 1903–4 amounted to about 1½ lakhs. The *tāluka* is a compact and well-wooded tract, hilly and picturesque throughout. Occasional frosts occur in the cold season. The Anās river flows along the eastern boundary, and several large reservoirs for the storage of water exist.

Godhra Tāluka.—Northern *tāluka* of the western portion of Pānch Mahāls District, Bombay, lying between 22° 42′ and 23° 6′ N. and 73° 22′ and 73° 58′ E., with an area of 585 square miles. It contains one town, GODHRA (population, 20,915), the head-quarters; and 225 villages. The population in 1901 was 96,406, compared with 107,567 in 1891, the decrease being due to famine. The density, 165 persons per square mile, is nearly equal to the District average. The land revenue and cesses in 1903–4 amounted to Rs. 92,000. The *tāluka* is chiefly a roughly tilled plain, covered with brushwood and forest; but to the north its surface is broken by patches and peaks of granite rock. The westerly portion is well wooded and well tilled. The climate is unhealthy. The annual rainfall averages 40 inches. The Mahī and the Pānam flow through the *tāluka*. Maize is the staple of cultivation.

Kālol Tāluka.—Southern *tāluka* of the western portion of Pānch Mahāls District, Bombay, including the petty subdivision (*petha*) of Hālol, lying between 22° 15′ and 22° 44′ N. and 73° 22′ and 73° 44′ E., with an area of 414 square miles. It contains one town, Kālol (population, 4,446), the head-quarters; and 252 villages. The population in 1901 was 73,796, compared with 87,851 in 1891, the decrease being due to famine. The density, 178 persons per square mile, slightly exceeds the District average. Kālol forms a rich well-wooded plain, its fields fenced with hedges and rows of brab palms, its villages compact and comfortable. Three rivers cross the *tāluka*: from east to west the Mesri in the north, the Goma in the centre, and the Karād in the south. These rivers become torrents in the rains, and trickling streams in the cold season. Light or *gorādu* soil lies all over this part of the country; the black cotton soil is not met with. The petty subdivision of Hālol is a well-wooded and tilled plain surrounding the hill fort of Pāvāgarh. To the east and south, low isolated hills stand out from a rich black-soil plain, most of it waste. Within 4 or 5 miles of the hills the climate is unhealthy and the water often deleterious. Three rivers, the Karād, Visvāmitri, and

Devnadī, cross Hālol from east to west. Water lies near the surface. Cultivation is rude, and the peasantry inert. The annual rainfall averages 37 inches. The land revenue (including Hālol) and cesses in 1903–4 amounted to more than 1·1 lakhs.

Bhīmkund.—A large earthen basin formed by a waterfall of the Khan river about 70 feet high in the *tāluka* of Dohad, Pānch Mahāls District, Bombay, situated in 22° 45′ N. and 74° 19′ E., 5 miles south of Dohad. Here, four days before the Holī festival (March), come thousands of Bhīls, some of them from considerable distances. Those who have during the year lost friends, relations, or parents, bring their ashes with them and throw them into the pool. Then they wash, and, going to Brāhmans, who are always present in great numbers, have a red spot marked on the brow, and in return give some small present in money or grain. Then drinking begins, and, if money lasts so long, is kept up for about a fortnight.

Chakki-no-Aro (or 'Grindstone Bank').—Place of pilgrimage on the Karād river in the Kālol *tāluka* of Pānch Mahāls District, Bombay, situated in 22° 35′ N. and 73° 35′ E., between the villages of Medapur and Marva. In the middle of the river where the channel is deepest stands a large rock, over which, in ordinary course, the stream would flow in a cascade into the deep pool below. But above the rock a rectangular reservoir has been built, about 15 feet square, and 4 to 5 feet deep, partly of brick and partly of rock, the large rock forming its lower side. Into this the water of the river runs, and passes out of it, not over the large rock, but by a channel, 6 to 8 feet long, cut from the deepest part of the reservoir right through the centre of the rock. Out of this the water spouts and falls into a deep pool several feet below. At eclipses of the sun, and at the Mahoda Parv or Somvati Amās, when the last day of the month falls on a Monday, and also on other occasions, Brāhmans, Rājputs, and Vānīs come to bathe and wash away their sins in the pool. The legend is that a certain Rājā Sulochan of Benares was troubled with a growth of hair on the palms of his hands, sent him as a punishment for his sins. As none of the Benares seers could cure him, he was advised to go to the famous Vishvāmitra, who lived where Pāvāgarh now stands. Vishvāmitra told him that if he sacrificed at a spot in the river where a sacred grindstone lay, his sins should be destroyed as grain is ground to powder in a grindstone. The Rājā went to the spot, built a place of sacrifice, and cut a conduit in the rock through which

to feed with butter the fire of his sacrifice. The river became known as the Kar ('hand'), since corrupted into Karād Gangā, and the place of sacrifice as the Chakki-no-Aro or 'grindstone bank.' Half the grindstone is still there; the other half was stolen by a Gosain, who, being pursued, threw it away where it still lies between the villages of Viasra and Alāli in Kālol.

Chāmpāner.—Ruined city in the Kālol *tāluka* of Pānch Mahāls District, Bombay, situated in 22° 29′ N. and 73° 32′ E., 25 miles north of Baroda, at the north-east base of Pāvāgarh, a fortified hill of great strength. It is a station on the Baroda-Godhra chord railway, recently constructed. The name is derived from the *champak*-tree. The first building of the Musalmān city was begun in 1483, when Mahmūd Begara was besieging the Rājputs in PĀVĀGARH. As a sign that he would not leave till the fort was taken, he laid the foundation of a beautiful mosque. The fort fell in 1484, and the Rājputs fled to Chota Udaipur and Deogarh Bāriya, where their descendants still rule. Mahmūd Begara raised a noble city at the base of the hill, bringing his ministers and court from Ahmadābād, made it his capital, and styled it Mahmūdābād Chāmpāner. It grew rapidly and developed a flourishing trade, being especially famous for silk-weaving and the manufacture of sword-blades. It is worthy of note that the materials for its iron industry were found in the adjacent hills. The greatness of Chāmpāner was short-lived. In 1535 it was pillaged by the emperor Humāyūn; and on the death of Sultān Bahādur Shāh the capital and court were re-transferred to Ahmadābād. By the beginning of the seventeenth century its buildings were falling into ruins, the jungle was encroaching, and the climate had greatly deteriorated. When taken by the British in 1803 only 500 inhabitants were found. Several attempts to colonize it have failed on account of the unhealthy climate; and at present the only inhabitants are two Koli families and some *pūjāris* connected with the temple worship on Pāvāgarh.

The magnificent ruins of Chāmpāner make it a place of great interest. From the spurs on the north-east, the only side on which the hill is accessible, the fortifications of Pāvāgarh are brought down to the plain and closed by a wall one mile in length running due east and west. Outside this line, and in part replacing the old fortifications, is the Bhādar, or citadel, of Mahmūd Begara. A perfect rectangle about three-quarters of a mile long and 280 yards broad, the Bhādar is enclosed by a wall of massive blocks of freestone, strengthened

by bastions at regular intervals, and beautified by small carved balconies in the best Musalmān style. This was the centre of the city, which stretched with fair gardens and beautiful buildings from Hālol, 4 miles away on the west, to an immense park on the east, the boundaries of which are marked by the traces of an extensive wall. On the north-east was constructed the Bada Talao ('great lake'), fed by a canal from the eastern hills. Ruins of beautiful workmanship are scattered over the whole area, and five of the mosques are still in fair preservation. Of the most notable of these, the Jāma Masjid, which stands about 50 yards from the east gate of the Bhādar, it may be said that for massive grandeur and perfect finish it is inferior to no Musalmān building in Western India. To the south-east of the Bhādar, enclosed by a spur of the overhanging mountain, is a large deep reservoir completely surrounded with stone steps.

[Forbes, *Ras Māla*; Briggs, *Ferishta*, vol. iv, p. 70; Hamilton, *Hindustan*, vol. i, p. 681; *Transactions of Bombay Literary Society*, vol. i, p. 151; *Indian Antiquary*, vol. lxii, p. 5, and vol. xliii, p. 7.

Dohad Town.—Head-quarters of the *tāluka* of the same name in Pānch Mahāls District, Bombay, situated in 22° 50′ N. and 74° 16′ E., on the Godhra-Ratlām Railway. Population (1901), 13,990. As the name Dohad (or 'two boundaries') implies, the town is situated on the line separating Mālwā on the east from Gujarāt on the west. It is a place of considerable traffic, commanding one of the main lines of communication between Central India and the sea-board. The strongly built *sarai* dates from the reign of the Gujarāt Sultān, Ahmad I (1411–43). It was repaired by Muzaffar II (1511–26), also a Gujarāt monarch, and is said to have been again restored under the orders of the emperor Aurangzeb (1658–1707). Dohad was constituted a municipality in 1876. The municipal income during the decade ending 1901 averaged about Rs. 13,000. In 1903–4 the income was Rs. 12,000. The town contains a Sub-Judge's court, a dispensary, and five schools for boys and one for girls, attended by 176 and 91 pupils respectively.

Godhra Town.—Head-quarters of the *tāluka* of the same name in Pānch Mahāls District, Bombay, and also head-quarters of the District, situated in 22° 46′ N. and 73° 37′ E., on the Godhra-Ratlām Railway, 319 miles from Bombay. Population (1901), 20,915; Hindus number 10,028, Muhammadans 10,083, and Jains 635. Formerly it was the residence

of a provincial governor under the Muhammadan kings of Ahmadābād. Godhra is now the head-quarters of the Rewā Kāntha Political Agency, which was transferred from Baroda to the Collector of the Pānch Mahāls in 1880. The Godhra municipality, constituted in 1876, had an average income of Rs. 19,000 during the decade ending 1901. In 1903–4 the income was Rs. 20,104. There are two tanneries doing a moderate business. Godhra is the centre of the trade in timber and firewood extracted from the forests of the District and neighbouring States, and exported to the rest of Gujarāt. Near the town is an embanked lake 70 acres in area. The town contains a Sub-Judge's court, a civil hospital, and an English high school with 154 pupils; also five vernacular schools for boys and two for girls, with 194 and 315 pupils respectively.

Hālol.—Head-quarters of the petty subdivision (*petha*) of the same name in the Kālol *tāluka* of Pānch Mahāls District, Bombay, situated in 22° 30′ N. and 73° 29′ E., on the high road to Jāmbughoda, about 7 miles south of Kālol and 4 north-west of Pāvāgarh hill. Population (1901), 2,819. Besides well-to-do Kunbī cultivators, the largest class in the village, there are Vānī traders carrying on business in grain and forest produce with Jāmbughoda, and in hardware, tobacco, and cloth with Godhra and Baroda. At Hālol is said to have been (1484) the most beautiful of all the gardens for which Chāmpāner was famous. The chief relic of its former prosperity as a suburb of Chāmpāner is a reservoir of considerable size to the north-east. Near the present site is a mausoleum, which was described in 1785 as consisting of two large and five small domed structures, all of admirable workmanship, the two larger containing marble tombs adorned with excellent skill. Since then some of the domes have fallen, but in other respects the buildings are in good repair. They were raised by Bahādur Shāh (1526–37) in honour of his brother Sikandar Shāh, who was murdered by Imād-ul-mulk in 1526 (May 30) after a reign of three months and seventeen days. The mausoleum contains two other tombs—one to Nasīr Khān, the other to Latīf Khān, both of them brothers of Bahādur Shāh, who died in the same year (1526). The town contains a dispensary, and two schools for boys and one for girls, attended by 181 and 51 pupils respectively.

Jhālod.—Town in the petty division (*petha*) of the same name in the Dohad *tāluka* of Pānch Mahāls District, Bombay, situated in 23° 6′ N. and 74° 9′ E. Population (1901),

5,917. The inhabitants are mostly Bhīls, Ghānchis, and Kunbīs. There is an export trade in grain, pottery, cotton cloth, and lac bracelets in imitation of the costly ivory Ratlām bracelets. Flagstone is also exported in large quantities. The town contains a dispensary and six schools, four for boys and two for girls, attended by 223 and 88 pupils respectively.

Pāvāgarh.—Hill fort in the Kālol *tāluka* of Pānch Mahāls District, Bombay, situated in 22° 31′ N. and 73° 36′ E., about 28 miles east of Baroda and 11 miles south-east of Chāmpāner Road station on the Baroda-Godhra Railway. It stands on an isolated hill surrounded by extensive plains, from which it rises abruptly to the height of 2,500 feet, being about 2,800 feet above the level of the sea. The base and lower slopes are thickly covered with rather stunted timber; but its shoulders and centre crest are, on the south, west, and north, cliffs of bare trap, too steep for trees. Less inaccessible, the eastern heights are wooded and topped by massive masonry walls and bastions, rising with narrowing fronts to the scarped rock that crowns the hill. To the east of Pāvāgarh lie the vast Bārya State forests, and the hill seems to form the boundary between the wild country to the east and the clear open plain that stretches westward to the sea. On the east side of the north end of the hill are the remains of many beautiful Jain temples; and on the west side, overlooking a tremendous precipice, are some Musalmān buildings of more modern date, supposed to have been used as granaries. The southern extremity is more uneven, and from its centre rises an immense peak of solid rock, towering to the height of about 250 feet. The ascent to the top of this is by a flight of stone steps, and on its summit stands a Hindu temple of Kālī, with a Musalmān shrine on its spire. The fortifications include the lower fort, a massive stone structure with strong bastions stretching across the less precipitous parts of the eastern spur. This line of fortification is entered by the Atak Gate, once double, but now with its outer gate in ruins. Half a mile farther is the Moti or Great Gate, giving entrance to the second line of defence. The path winds up the face of the rock through four gates, each commanding the one below it. Massive walls connect the gates and sweep up to the fortifications that stretch across the crest of the spur. Beyond the Moti Gate, the path for about 200 yards lies over level ground with a high ridge on the left, crowned by a strong wall running back to the third line of defence. This third line of defence is reached through the Sadan Shāh Gate,

a winding passage cut through the solid rock, crowned with towering walls and bastions, and crossed by a double Hindu gateway.

In old inscriptions the name of the hill appears as Pāvakgarh or 'fire hill.' The first historical reference to it is in the writings of the bard Chānd, twelfth century, who speaks of Rām Gaur the Tuār as lord of Pāva. The earliest authentic account is about 1300, when it was seized by Chauhān Rājputs, who fled from Mewār before the forces of Alā-ud-dīn Khiljī. The Musalmān kings of Ahmadābād more than once attempted to take the fort, and failed. In 1484 Sultān Mahmūd Begara, after a siege of nearly two years, succeeded in reducing it. On gaining possession, he added to the defences of the upper and lower forts, and for the first time fortified the plateau, making it his citadel. In spite of its strength, it was captured through treachery in 1535 by the emperor Humāyūn. In 1573 it fell into the hands of Akbar. In 1727 it was surprised by Krishnājī, who made it his head-quarters, and conducted many raids into Gujarāt. Sindhia took the fort about 1761; and Colonel Woodington captured it from Sindhia in 1803. In 1804 it was restored to Sindhia, with whom it remained until 1853, when the British took over the management of the Pānch Mahāls.

Boundaries, configuration, and hill and river systems.

Broach District (*Bharūch*).—District in the Northern Division of the Bombay Presidency, lying between 21° 25′ and 22° 15′ N. and 72° 31′ and 73° 10′ E., with an area of 1,467 square miles. It is bounded on the north by the river Mahī, which separates it from the territory of Cambay; on the east and south-east by the States of Baroda and Rājpīpla; on the south by the river Kīm, dividing it from Surat District. To the west lies the Gulf of Cambay, along the shore of which the District stretches for a distance of 54 miles. The name is derived from Bharukachha, a corruption of Bhrigu Kachha, 'the field of Bhrigu,' the eponymous hero of Broach city.

The District forms an alluvial plain 54 miles in length, sloping gently westwards to the shores of the Gulf of Cambay, and varying in breadth from 20 to 40 miles. With the exception of a few hillocks of sand-drift along the coast, and some mounds in the neighbourhood of Broach city, the level of the plain is unbroken by any rising ground. The Mahī and Kīm—the former a river of 300 miles in length, with a drainage area estimated at from 15,000 to 17,000 square miles, and the latter with a course of 70 miles and a drainage area of about 700 square miles—form respectively the northern and southern boundaries of the District. Between these limits are two other

rivers which discharge their waters through the Broach plain into the Gulf of Cambay—the Dhādhar about 20 miles south of the Mahī, and the Narbadā between the Dhādhar and the Kīm. The Dhādhar passes through the Broach plain for 24 miles, or about one-third of the entire length of its course; and the Narbadā flows for the last 70 miles of its course through the District, gradually widening into an estuary, whose shores when they fall away into the Gulf of Cambay are more than 13 miles apart. The water of these rivers is not made use of for irrigation; and though each has a tidal estuary extending for several miles inland, none of them, except the Narbadā, and for a short distance the Dhādhar, is serviceable for purposes of navigation. Owing to the height of the banks of its rivers, the District is, for drainage purposes, to a great extent dependent on creeks or backwaters running inland, either directly from the coast-line or from the banks of rivers at points in their course below the limit of tidal influence. Of the salt-water creeks or backwaters, the three most important are the Mota, breaking off from the Dhādhar river about 6 miles west of the town of Amod; the Bhūkhi, running inland from the right bank of the Narbadā, about 15 miles west of the city of Broach; and the Wand, an inlet from the shore of the Gulf of Cambay, about 8 miles north of the mouth of the Kīm river.

The surface of the plain consists, over almost its entire area, of black cotton soil, highly fertile and well cultivated. This black soil covers deposits of brown clay, containing nodular limestone above and gravel and sand underneath. Within 30 miles of the coast hardly any rocks are to be seen. Farther inland, the gravels and clays of the Nummulitic series begin to appear, and in the south of the District trap crops out. Conglomerate and limestone are also found in this tract, but otherwise the plain of Broach contains no minerals. Geology.

Except for a small tract of waste land 161 acres in extent, lately set apart for the growth of *babūl* trees, the District is without forests; and only in a few villages is the plain well covered with trees. The palmyra palm, the only liquor-yielding tree, is largely found south of the Narbadā. The fruit trees are the mango, guava, and tamarind. On an island in the Narbadā, about 12 miles above Broach, is a famous banyan or *vad* tree, known as the *Kabīr vad*, because, as the story goes, it sprang from a twig which the sage Kabīr once used for cleaning his teeth. About the year 1780 this tree is said to have had 350 large and more than 3,000 small stems, the principal of which enclosed a space nearly 2,000 feet in circumference. Botany.

During the march of an army this tree had been known to shelter 7,000 men. Nearly fifty years later (April, 1825) Bishop Heber wrote of it: 'Though a considerable part of the tree has, within the last few years, been washed away, enough remains to make it one of the most notable groves in the world.' Since then it has suffered much from age and floods, and, owing to the dense undergrowth which conceals the ramifications of its stems, it is no longer so notable an object as formerly. *Hibiscus*, *Crotalaria*, *Indigofera*, *Butea*, *Cassia*, *Vicoa*, *Leucas*, and *Tricholepis* are the chief flowering plants.

Fauna.

Cultivation is too general to allow much scope for wild animals. The hog, wolf, and antelope almost exhaust the list. The only indigenous game-birds are the grey partridge, the bush-quail, and the grey duck. The District is well supplied with fish—fresh-water, salt-water, and migratory.

Climate and temperature.

The District is as healthy as any part of Gujarāt, and the climate is more pleasant than in those parts situated farther from the sea. The hottest months are March and April. In the cold season frost is not unknown, and is sometimes, as in 1835 and 1903, sufficiently severe to destroy the crops. The temperature ranges from 46° in December to 112° in May.

Rainfall.

The annual rainfall over the whole District averages 35 inches, varying from 32 in the Hānsot *petha* to 42 at head-quarters.

History.

By tradition Broach District once formed part of the Mauryan empire, the famous ruler of which, Chandragupta, is said to have resided at Suklatīrtha. It then passed into the hands of the princes known as the Sāhas or Western Kshatrapas. Gūrjar and Rājput rulers followed, subject to the overlordship of the Chālukyas of Kalyān and their successors the Rāshtrakūtas. It was subsequently included in the kingdom of Anhilvāda until the Musalmān conquest in 1298. For nearly five hundred years the District remained subject to the Musalmāns, in four periods, the early Musalmān governors of Gujarāt (1298–1391) being succeeded by the Ahmadābād kings (1391–1572), who were replaced by the Delhi emperors (1572–1736), and finally by independent chiefs (1736–72). During the third period, Broach was visited by the English merchants Aldworth and Withington, and in 1616 a house was hired for an English factory. A Dutch factory followed about 1620. At the end of the seventeenth century the Marāthās twice raided the city of Broach. But soon after the accession of the British to political power at Surat, certain questions of revenue gave rise to a dispute with the ruler of Broach, and in 1771 a force was sent from Surat against his capital. This expedition, which was

not begun till May, resulted in failure; but during the ensuing rainy season the Nawāb of Broach visited Bombay and agreed to pay to the English a sum of 4 lakhs. This, however, he failed to do, and in November, 1772, a second expedition was sent against Broach. The city was taken with little difficulty, though with the loss of General Wedderburn, the commander of the force. The territory acquired by the capture of the city comprised 162 villages. In 1783 the country under Broach, which by treaty and conquest had come to include the lands of Anklesvar, Hānsot, Dehejbāra, and Amod, was by the Treaty of Sālbai handed over to the Marāthās—the original conquest to Mahādjī Sindhia, and the new acquisitions to the Peshwā. For nineteen years these territories remained under Marāthā rule, till in 1803, in consequence of the Treaty of Bassein, Sindhia's possessions in Gujarāt were invaded by a British force, and the city of Broach was again taken. No further territorial changes took place till 1818, when, under the terms of the Treaty of Poona, three *tālukas* were added to the District. Since that date the history of Broach has been marked by three events—in 1823 an outbreak of Kolīs took place; in 1857 a riot between the Pārsīs and Musalmāns; and in 1886 a Tataora rising, leading to the murder of the District Superintendent of police.

Jain, Hindu, and Muhammadan buildings of archaeological interest are to be met with in Broach city, the most noteworthy being the Jāma Masjid, profusely ornamented and sculptured in the Jain style. Archaeology.

The earliest year for which an estimate of the population is available is 1820, when the number of inhabitants was returned at 229,527, or 173 to the square mile. In 1851 the number was 290,984, or 200 to the square mile. At the last four enumerations, the population was: (1872) 350,322, (1881) 326,930, (1891) 341,490, and (1901) 291,763. The Census of 1901 shows that the population of the District, after considerable fluctuations between 1872 and that date, is now 199 to the square mile. The decline in 1881 was due to failure of the crops in 1878 and to a severe outbreak of cholera, which reduced the population by 7 per cent. The decrease in 1901 was due to famine and plague. The District comprises five *tālukas*, with area and population as given on the next page. The people.

Of the whole population, about 20 per cent. live in towns containing more than 5,000 inhabitants. Originally the towns were walled, and each was provided with its own fort. Within the circuit of the walls lived the richest part of the people,

dwelling in well-built houses; without were the poorer classes, lodged chiefly in hovels. Though the fortifications have now been allowed to fall into decay, a marked distinction still remains between the town proper and its suburbs. The villages have in general a thriving appearance, arising from the common use of tiles for the houses instead of thatch; and the trees with which they are surrounded contribute to give a pleasing effect. The respectable inhabitants have their houses together in courts or 'closes,' with a single entrance for each 'close,' which is shut at night for the protection of cattle. Formerly, many of the villages were surrounded by walls of mud or burnt brick as a shelter against the attacks of free-booters. The towns are BROACH, the head-quarters, AMOD, ANKLESVAR, HĀNSOT, and JAMBUSAR. Hindus number 195,922, or 67 per cent. of the total; Musalmāns, 63,408, or 22 per cent.; Animists, 25,294, or 8 per cent.; Jains, 3,254; and Pārsīs, 3,127. Gujarātī is spoken by 93 per cent. of the people.

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Jambusar	387	1	81	61,846	160	− 25	7,599
Amod	176	1	51	31,911	181	− 17	4,958
Vāgra	308	...	69	26,686	87	− 27	3,567
Broach	302	1	105	110,189	364	− 2	19,894
Anklesvar*	294	2	99	61,131	208	− 14	8,730
District total	1,467	5	405	291,763	199	− 14	44,748

* Includes Hānsot *petha*.

Castes and occupations. The chief Hindu castes are: Kolīs (62,000), Kunbīs (19,000), Dhers (15,000), Rājputs (13,000), and Brāhmans (12,000). Bhīls, returned partly as Hindus and partly as Animists at the Census, number 35,000. The Musalmāns who claim a foreign origin comprise four classes—Saiyid, Mughal, Pathān, and Shaikh. Of those whose origin is traced to Hindu converts, the most important are the Bohrās, who include two main classes, distinct from each other in occupation and in sect: one engaged in trade, who are mostly Ismaili Shiahs; the other employed almost entirely in tilling the fields, belonging to the Sunni sect, and forming nearly half of the entire Musalmān population of the District. The latter do not marry with other Musalmāns. The total number of Bohrās is 31,000. The other classes of converted Hindus are Molesalāms (formerly

Rājputs), Māliks, Momnās, and Shaikhs. The Shaikhs number altogether 12,000. With the exception of the trading Bohrās, who are well-to-do, the Broach Musalmāns are for the most part in a depressed condition. There is also a peculiar Musalmān community called Nāgoris, who have long been settled in the District. They are said to derive their name from their former home, Nāgor, a town in Mālwā, and are now carters and labourers.

The chief agricultural classes of Broach District are Pātidārs (also called Kunbīs), Girāsiās, Kachhias, Mālīs, and Kolīs; the trading classes are Vaishnava Baniās, as well as Shrāwaks or Jains, Bohrās of the Shiah sect, and Pārsīs. The Pātidārs, as peaceable as they are industrious, form the most respectable part of the rural population; they are well acquainted with the qualities and powers of all varieties of the soil. The Girāsiās afford an instance of a complete change from the fierceness and turbulence of a martial class to the quietness, obedience, and industry of tillers of the soil. The Kachhias are skilful market-gardeners. The Kolīs, who stand lower in the social scale than the Kunbīs, formerly bore a bad reputation as plunderers, but they are now a reformed race. In many villages they are as steady and hard-working cultivators as any in the District. A few Pārsīs are engaged in agriculture, and are said to be active and skilful husbandmen. Most of the members of this class deal in merchandise, and with the Shrāwaks form the two most wealthy sections of the trading community. Agriculture supports 60 per cent. of the population, 16 per cent. are supported by industries, and 2 per cent. by commerce.

Christian missions. The number of Christians has increased during the last decade from 128 to 719. Of these, 685 are native Christians. The Christian population is found mainly in Broach city and *tāluka*. Two missions are at work in the District: the Irish Presbyterian at Broach city, which supports a hospital, two dispensaries, an industrial school, two orphanages, and two primary schools; and the German Baptist Mission at Anklesvar, which supports an orphanage and an agricultural settlement.

Agricultural conditions. The soil is chiefly black, but there are also tracts of brown soil in Anklesvar, Amod, and Jambusar. Both kinds are rich, the chief black-soil crops being cotton, *jowār*, sesamum, *tur*, wheat, and rice; while *bājra*, *jowār*, and pulse are grown in the lighter soils. Tobacco is raised on the alluvial lands of the Narbadā. The early crops are sown in June, and, except cotton, which is seldom ready for picking before February, are harvested in October and November. The late crops are

sown in October and reaped in February. A field of black soil requires only one ploughing, and is seldom manured. Light soils, on the other hand, are ploughed three or four times, and are generally manured. The entire set of implements used on a farm may be valued at from Rs. 15 to Rs. 20.

Chief agricultural statistics and principal crops.

The chief statistics of cultivation are as shown below, in square miles :—

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.
Jambusar	387	244	0.09	19.0
Amod	176	145	0.02	0.5
Vāgra	308	204	0.01	6.0
Broach	290*	200	0.22	2.0
Auklesvar	306*	213	0.50	21.5
Total	1,467†	1,006	0.84	49

* The difference between these figures and those shown on p. 308 is due to the fact that since the Census certain villages have been transferred from Broach to Anklesvar.

† The area for which statistics are not available is 29 square miles.

A considerable area of salt land has been taken up by private individuals for reclamation. The lands have been leased by Government on special conditions, rent free for the first ten years, and for the following twenty years at rents varying from 4 to 8 annas per acre, to be subject to the usual assessment after thirty years. The tenure of the District is mainly *ryotwāri*, *inām* and *jāgīr* lands covering only about 2 per cent. The holders of unalienated land belong to two classes—proprietors of large estates or *thākurs*, and peasant proprietors or ryots. Of the total assessed area, 60,760 acres, or about 10 per cent., are in the possession of men belonging to the landlord class, who are the heirs of old Rājput families. A peasant proprietor is either a member of a cultivating community, or an independent holder with an individual interest in the land he tills. Of the whole number of villages in the District, the lands of 244, or 59·5 per cent., were in 1862 held by corporations of shareholders, and the remaining 166, or 40·5 per cent., by individual cultivators. In 1903–4, 209 were held under the former conditions, and 197 by individuals. Cotton and *jowār* are extensively grown in the District, occupying 365 and 180 square miles respectively. Wheat (118) is also largely grown, especially in the Vāgra and Jambusar *tālukas*. Next in importance come sesamum (31), rice (23), and *bājra* (16). Tobacco is one of the important

crops in the Broach *tāluka*, and *lang* (*Lathyrus sativus*) is also largely grown (66 square miles).

Improvements in agricultural practice.

Since 1812 attempts have been made from time to time to improve the cultivation and preparation of cotton. So far the result has been to show that foreign varieties will not thrive in the District. In the matter of ginning, considerable improvements have been made. By the introduction of the Platt-Macarthy roller-gin in 1864, the old native hand-gin (*charkha*) has been entirely supplanted. During the decade ending 1903–4, 24 lakhs was advanced to the ryots under the Land Improvement and Agriculturists' Loans Acts, of which 11 lakhs was lent in 1900–1 and 8.6 lakhs in 1899–1900.

Cattle, ponies, &c.

The domestic animals are cows, buffaloes, oxen, ponies, asses, sheep, and goats. The cattle are of two breeds: the small indigenous bullock, and the large bullock of Northern Gujarāt. The smaller breed of bullocks, generally driven in trotting carts, are worth from Rs. 80 to Rs. 120 each. Prosperous cultivators pay much attention to the appearance and condition of their cattle.

Irrigation.

Only an infinitesimal portion of the District (533 acres in 1903–4) is irrigated. The chief sources of supply are 39 Government 'minor' works, 1,153 wells, and 100 tanks. Nine drainage channels were recently excavated by famine labour in the District at a cost of Rs. 42,000.

Forests.

There are no forests in the District; but a tract of about 10,000 acres in extent has recently been set apart for the rearing of *babūl* and other trees.

Minerals.

With the exception of a conglomerate stone and limestone in the Anklesvar *tāluka*, the plain of Broach is destitute of mineral resources.

Arts and manufactures.

The English and the Dutch were tempted to establish factories at Broach, owing to its reputation for the manufacture of fine silk and cotton goods. Competition with the machine-made article has so reduced the number of weavers of hand-made fabrics that, at the Census of 1901, the weavers employed in the local mills were twice as numerous as the hand-workers. There are four cotton-spinning and weaving mills at Broach, with 62,000 spindles and 859 looms, giving employment to 2,212 operatives, and producing annually 5,000,000 lb. of yarn and 3,000,000 lb. of cloth. Some roughly finished hardware, mainly knives and tools, is made at Amod.

The trade guilds of Broach include the leading capitalists of the city, the bankers and money-changers, cotton-dealers, agents, and those engaged in the business of insurance; other

unions represent the smaller trades, and are conducted on the *panchāyat* system common in some parts of India. Details of the constitution and objects of these associations are given in the article on Ahmadābād District, where the system is more fully developed than in Broach. One of the main sources of revenue of the chief guild of Broach city is a tax of from 4 to 8 annas per bale of cotton. Except in the case of cotton bills, there is also a charge of one anna on every bill of exchange negotiated. The receipts from these taxes are applied to objects of charity and religion. The chief institution maintained is the hospital (*pānjrāpol*) for old and sick animals, supported at a yearly cost of about Rs. 5,300. In addition to fees and fines levied upon members for breaches of trade rules, some of the guilds adopt special means for collecting funds. Money-changers, grain-dealers, grocers, and tobacco merchants make the observance of their trade holidays—the 2nd, the 11th, and the last day of each fortnight—a source of revenue to the general body. On the occasion of these holidays, only one shop is allowed to remain open in each market. The right to open this shop is put up to auction, and the amount bid is kept for caste purposes. Similarly, the bankers, cotton-dealers, insurers, and bricklayers have, for trade purposes, imposed a tax on the members of their craft or calling. In the case of other classes, the necessary sums are collected by subscription among the members of the caste.

Commerce.

Formerly the Gujarāt and Mālwā trade passed through the ports of Broach and Tankāri; but since the opening of the railway, trade to the sea-coast has greatly diminished. Eighteen hundred years ago Broach was one of the chief seats of trade between India and Western Asia. Gold and silver, slaves, pearls, Italian and Persian wines, and dates were largely imported; and rice, *ghī*, cotton, oil, and sugar were exported, besides sandal-wood, ebony, and muslins. This trade continued until the seventeenth century, when it began to centre in Surat, and subsequently moved to Bombay. Only a small coasting trade now remains. Cotton, wheat, and piece-goods are the chief exports, while yarn, metals, sugar, piece-goods, and timber are imported. In 1903–4 the port of Broach had an import trade of 18 lakhs and an export trade of 13 lakhs, while Tankāri on the Dhādhar river had a total import and export trade combined of 5 lakhs.

Communications. Railways and roads.

External communication is now effected by the Bombay, Baroda, and Central India Railway, which passes through the Anklesvar and Broach *tālukas*, crossing the Narbadā by a fine

bridge of 25 spans. A branch of the Rājpīpla State Railway connects Anklesvar with Nandod. The former traverses the District for 27 miles and the latter for 6¼ miles. Passengers from Kāthiāwār can also arrive by sea. The District possesses 37 miles of metalled roads and 138 miles of unmetalled roads. About 28 miles of the former class are maintained by the Public Works department. Avenues of trees are planted along 52 miles. The estuaries of the Narbadā and Dhādhar rivers afford shelter to coasting vessels during the stormy months of the monsoon. There were in 1820 five seaports, of which only two, Broach and Tankāri, are still seats of trade.

Famine.

The years 1630, 1631, and 1755 are said to have been seasons of scarcity, in which, owing to the failure of crops, remissions of revenue were granted. In 1760–1, 1773, and 1786–7 portions of the District verged so closely upon famine that the revenue had to be very largely remitted. The great famine of 1790 was caused by the entire failure of the monsoon. The year 1819 was marked by excessive rainfall, and 1838, 1840, and 1868 by total or partial failure of rain. In 1812 the District suffered from the ravages of locusts, and in 1835 from frost. Years of partial drought have also been numerous. In 1878 the autumnal crops failed in two of the western *tālukas*, on account of excessive rainfall; all the fields sown after a certain period were attacked by swarms of grubs. Between 1899 and 1902 the District suffered from severe famine due to insufficient rain. Relief works, opened in September, 1899, were continued till October, 1902. The highest daily average on works was 106,215 in February, 1900, and on gratuitous relief 72,473 in August, 1900. The mortality rose to 87 per 1,000. Nearly 30 lakhs of revenue was remitted and over 22 lakhs[1] was advanced to cultivators.

District subdivisions and staff.

For administrative purposes the District is divided into five *tālukas*: namely, AMOD, BROACH, ANKLESVAR, JAMBUSAR, and VĀGRA, the petty subdivision (*petha*) of HĀNSOT being included in Anklesvar. The administration in revenue matters is entrusted to a Collector and two Assistants, of whom one is a Covenanted Civilian.

Civil and criminal justice.

For judicial purposes the District was formerly included within the jurisdiction of the Judge of Surat. It now contains one District Judge with full powers, and 4 Subordinate Judges. Criminal justice is administered by 8 Magistrates. The District is not remarkable for serious offences against property;

[1] This figure is for the whole famine period from Sept. 1, 1899, to Oct. 31, 1902.

but among the cultivating Bohrās and the Bhīls outbursts of violence are not uncommon.

Land revenue administration.

At the time of the introduction of British rule (1803), there was in many villages an association of members of the proprietary body, by which the amount of the state demand was distributed according to a fixed proportion among the members. The peculiarities of this joint tenure (*bhāgdāri*) have, to some extent, disappeared before the system of collecting the revenue direct from the several shareholders.

At first the land revenue demand was fixed after an inspection of the crops by revenue superintendents or *desais*. This system led to numerous abuses. In 1811 the territory forming the original Broach District—namely, the *tālukas* of Broach, Anklesvar, and Hānsot—was surveyed. Later, the survey was extended to the remaining *tālukas* received under the Treaty of Poona in 1818. The first settlement in simple Government villages was made with the village headmen, and aimed at ascertaining the value of the crop in each holding. But in 1837 a new settlement was attempted, egulated by the character of the soil and the range of local prices. The year 1848 saw the settlement revised owing to the fall in prices, and in 1870–1 a fresh settlement on the lines adopted elsewhere in the Presidency was introduced. Under this settlement the realizations were about 19½ lakhs. The revision survey, completed since 1901, shows a decrease in cultivation of over 4,000 acres, and, in assessment, of 4 per cent. The average rates of assessment are: 'dry' land, Rs. 4–0 (maximum Rs. 6–8, minimum Rs. 3–0); rice land, Rs. 5–14 (maximum scale Rs. 5–4, minimum Rs. 3–0); and garden land, Rs. 8–11 (maximum Rs. 10–0, minimum Rs. 7–0).

Collections of revenue, in thousands of rupees, have been as follows:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	28,58	28,88	12,99	30,05
Total revenue . .	34,42	36,87	19,76	37,78

A small aristocracy of Rājput pedigree still occupies a position of some importance in the District; but being heavily burdened with debt, their estates would have been attached and sold if Government had not interfered and assumed the administration of their property under Act XV of 1871.

Municipalities

The District contains five municipalities: BROACH, ANKLESVAR, JAMBUSAR, HĀNSOT, and AMOD. The District board

and five *tāluka* boards, which are in charge of local affairs elsewhere, have an average revenue of more than $2\frac{1}{2}$ lakhs, chiefly derived from the land cess, and spent Rs. 61,000 on roads and buildings in 1903-4. and local boards.

The police of the District are controlled by a Superintendent, assisted by two inspectors. The total strength of the force is 454 persons, including 7 chief constables, 89 head constables, and 358 men. A body of 6 mounted police under one *daffadār* is also maintained. There are 7 police stations. The District contains 6 subsidiary jails and 12 lock-ups, with accommodation for 255 prisoners. The daily average prison population in 1904 was 48, of whom 8 were females. Police and jails.

Broach stands first as regards literacy among the twenty-four Districts of the Presidency, and 15·3 per cent. of the population (28·3 males and 1·8 females) could read and write in 1901. In 1880-1 there were 218 schools attended by 12,724 pupils, who had increased to 17,276 in 1890-1, and numbered 16,888 in 1901. In 1903-4, 328 public and private schools were attended by 17,424 pupils, including 2,967 girls. Out of 299 public institutions, 252 are managed by local boards, 32 by municipalities, one by Government, 9 are aided and 5 unaided. The public schools include one high school, 5 middle and 293 primary schools. The expenditure in 1903-4 was nearly $1\frac{1}{4}$ lakhs, of which Rs. 16,000 was derived from fees, and 83 per cent. was devoted to primary education. Education.

Besides a hospital at Broach the District contains 8 dispensaries, with accommodation for 74 in-patients. Including 538 in-patients, 51,500 persons were treated in 1904, and 1,699 operations were performed. The expenditure was Rs. 15,000, of which Rs. 9,000 was met from Local and municipal funds. Hospitals and dispensaries.

The number of persons successfully vaccinated in 1903-4 was 7,186, representing a proportion of 25 per 1,000, which is slightly below the average for the Presidency. Vaccination.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. ii, Surat and Broach (1877).]

Jambusar Tāluka.—Northern *tāluka* of Broach District, Bombay, lying between 21° 54′ and 22° 15′ N. and 72° 31′ and 72° 56′ E., with an area of 387 square miles. The population in 1901 was 61,846, compared with 82,396 in 1891. The density, 160 persons per square mile, is below the District average. The *tāluka* contains one town, JAMBUSAR (population, 10,181), the head-quarters; and 81 villages. The land revenue and cesses in 1903-4 amounted to 5·3 lakhs. The country consists of two tracts of level land. Towards the west lies

a barren plain, and in the east is a well-wooded stretch of light soil. In the latter tract are large and sweet springs, but in the former the water-supply is defective. The staple crops are *jowār*, *bājra*, and wheat; while miscellaneous crops include pulses, peas, tobacco, cotton, and indigo.

Amod Tāluka.—North-eastern *tāluka* of Broach District, Bombay, lying between 21° 51′ and 22° 3′ N. and 72° 41′ and 73° 4′ E., with an area of 176 square miles. The population in 1901 was 31,911, compared with 38,546 in 1891. The density, 181 persons per square mile, is below the District average. The *tāluka* contains one town, AMOD (population, 4,375), the head-quarters; and 51 villages. The land revenue and cesses in 1903–4 amounted to 3·2 lakhs. In the neighbourhood of the Dhādhar river, which forms the northern boundary, the country is wooded. The *tāluka* is chiefly black cotton soil, shading off towards the west into a grey soil too salt for cultivation. The water-supply is deficient. Of the cultivated area, grain crops occupy a third, and cotton a half.

Vāgra.—Central *tāluka* of Broach District, Bombay, lying between 21° 39′ and 21° 57′ N. and 72° 32′ and 72° 55′ E., with an area of 308 square miles. The population in 1901 was 26,686, compared with 36,939 in 1891. There are 69 villages but no town. The head-quarters are at the village of Vāgra. It is the most thinly-populated *tāluka* in the District, and the density, 87 persons per square mile, is much below the average. The land revenue and cesses in 1903–4 exceeded 3 lakhs. The eastern part of the *tāluka* is a flat rich surface of black soil; but the west, with the exception of a small fertile tract of light soil, forms an unfruitful salt plain. The water-supply is deficient in quantity and of inferior quality, a large proportion of the wells being brackish.

Broach Tāluka.—Central *tāluka* of Broach District, Bombay, lying between 21° 38′ and 21° 56′ N. and 72° 45′ and 73° 10′ E., with an area of 303 square miles. The population in 1901 was 110,189, compared with 112,906 in 1891. The density, 364 persons per square mile, is the highest in the District, and greatly exceeds the average. It contains one town, BROACH (population, 42,896), the head-quarters; and 105 villages. The land revenue and cesses in 1903–4 amounted to nearly 6 lakhs. Almost the whole of the *tāluka* is a flat rich plain of black soil stretching towards the north bank of the Narbadā, 43 miles of whose course lie within its limits. The remainder consists of a few islands in the bed of the

river, and a narrow strip of land on the southern bank, nearly opposite the city of Broach. The supply of tank and well water is defective.

Anklesvar Tāluka.—Southern *tāluka* of Broach District, Bombay (including the *petha* or petty subdivision of Hānsot), lying between 21° 25′ and 21° 43′ E. and 72° 35′ and 73° 8′ E., with an area of 294 square miles. The population in 1901 was 61,131, compared with 70,703 in 1891, the average density being 208 persons per square mile. It contains 99 villages and two towns, ANKLESVAR (population, 10,225), the head-quarters, being the larger. The land revenue and cesses in 1903–4 amounted to 5·9 lakhs. Seven square miles are occupied by the lands of alienated villages. The water-supply is good. About 3 miles from the Bombay, Baroda, and Central India Railway on the east lies an elevated ridge, from which the country slopes gradually down towards the Narbadā. In seasons of heavy rainfall many villages are flooded. The tract on the north of the Narbadā is the most fertile in the *tāluka*, while the lands in the peninsula between the Kīm and Narbadā, which produce only wheat and *jowār*, require heavy rain.

Amod Town.—Head-quarters of the *tāluka* of the same name in Broach District, Bombay, situated in 22° 0′ N. and 72° 52′ E., about a mile south of the Dhādhar river, 24 miles north of Broach city, and 30 miles south-west of Baroda. Population (1901), 4,375. It is the residence of a *thākur*, who owns about 21,200 acres of land, with an income of Rs. 72,000. Workers in iron make good edged tools, such as knives and razors. Amod has a small trade, chiefly in cotton. A municipality was established in 1890, its average income during the ten years ending 1901 being Rs. 6,100. In 1903–4 the income was Rs. 6,046. The town contains a dispensary and three schools—two for boys, including an English school, and one for girls, attended by 251 and 86 pupils respectively.

Anklesvar Town.—Head-quarters of the *tāluka* of the same name in Broach District, Bombay, situated in 21° 38′ N. and 72° 59′ E., on the Bombay, Baroda, and Central India Railway, 6 miles south of Broach city and 3 miles from the left bank of the Narbadā. It is connected by road with Hānsot (in the Anklesvar *tāluka*), 12 miles to the west, and by rail with Nāndod in the State of Rājpīpla (Rewā Kāntha Agency). Population (1901), 10,225. Cotton is the staple article of commerce, and there are a few ginning factories.

There are also a trade in rafters and bamboos, brought from the Rājpīpla forests, and a small manufacture of country soap and stone handmills. The old paper-manufacturing industry has now ceased. The municipality was established in 1876, and had an average revenue during the decade ending 1901 of Rs. 20,000. In 1903–4 the income was Rs. 23,600, derived chiefly from octroi (Rs. 8,000) and house and land tax (Rs. 5,600). The town contains a Sub-Judge's court, a dispensary, a library, and eight schools, including an English school for boys and one for girls, attended respectively by 576 and 98 pupils.

Broach City (*Bharukachha*, or *Bharūch*).—Head-quarters of the District of the same name in Gujarāt, Bombay, situated in 21° 42′ N. and 72° 59′ E., on the right bank of the Narbadā river, about 30 miles from its mouth, and on the Bombay, Baroda, and Central India Railway. The area, including suburbs, is $2\frac{1}{8}$ square miles. In 1777 the city is said to have contained 50,000 inhabitants; in 1812, 37,716. The Census of 1872 returned 36,932; that of 1881, 37,281; that of 1891, 40,168; and that of 1901, 42,896, comprising 26,852 Hindus, 12,022 Muhammadans, and 2,153 Pārsīs. The only classes calling for special notice are, among Hindus, the Bhārgav Brāhmans, who claim to be descendants of the sage Bhrigu. The Pārsīs, from the number and antiquity of their 'towers of silence,' are supposed to have settled at Broach as far back as the eleventh century. Formerly ship-builders and skilled weavers, they have suffered from the decay of both trades. Many of them migrated to Bombay to improve their circumstances; and the frugality of those that are left enables them to keep out of pauperism. The Musalmāns are for the most part in a condition of poverty.

Seen from the southern bank of the Narbadā, or approached by the railway bridge from the south, the massive stone wall, rising from the water's edge and lining the river bank for about a mile, and the buildings standing out from the high ground behind, give the city a picturesque appearance. The fortifications, though by local tradition ascribed to Siddha Rājā Jāyasingha of Anhilvāda (twelfth century), were, according to the author of the *Mirāt-i-Sikandari*, built in 1526 under the orders of Sultān Bahādur, king of Ahmadābād. In the middle of the seventeenth century (1660) the walls are said to have been destroyed by the emperor Aurangzeb, and about twenty-five years later to have been rebuilt by the same monarch as a protection against the attacks of the Marāthās. Of late years the fortifications on the land side have been allowed to

fall into disrepair, and in some places almost every trace of them has disappeared. On the southern side, where protection is required against the floods of the river, the city wall is kept in good order. Built of large blocks of stone, the river face of the wall, raised from 30 to 40 feet high, stretches along the bank for about a mile. It is provided with five gates, and the top forms a broad pathway. The circuit of the wall includes an area of three-eighths of a square mile, which in the centre rises to a height of from 60 to 80 feet above the surrounding country. This mound, from the broken bricks and other débris dug out of it, shows signs of being, in part at least, of artificial construction. At the same time the presence of one or two small hillocks to the north of the city favours the opinion that it may have been the rising ground on the river bank which led the early settlers to choose Broach as the site for a city. Within the walls the streets are narrow, and in some places steep. The houses are generally two storeys high, with walls of brick and tiled roofs. In the eastern part of the city are some large family mansions, said to have been built in 1790. In the suburbs the houses have a meaner appearance, many of them being not more than one storey high, with walls of wattle and daub.

With the exception of a stone mosque constructed out of an older Hindu temple, the city contains no buildings of interest. To the west are the groves of the well-wooded suburbs of Vejalpur, and northwards two lofty mounds with Muhammadan tombs relieve the line of the level plain, while on the north-east rows of tamarind-trees mark where a hundred years ago was the Nawāb's garden with 'summer pavilions, fountains, and canals.' To the east are the spots that, to a Hindu, give Broach a special interest, the site of king Bali's sacrifice and the temple of Bhrigu Rishi. About 200 yards from the bastion, at the north-west corner of the fort, is the tomb of Brigadier David Wedderburn, who was killed at the siege of Broach on November 14, 1772. Two miles west of the fort are a few large and massive tombs, raised to members of the Dutch factory. Beyond the Dutch tombs are the five Pārsī 'towers of silence': four being old and disused, and the fifth built lately by a rich merchant of Bombay.

The city of Broach was, according to local legend, originally founded by the sage Bhrigu, and called Bhrigupur or Bhrigu's city. In the first century of the Christian era the sage's settlement had given its name Barugaza to a large province, and had itself become one of the chief ports in Western India. In the

early part of the seventh century, according to the Chinese pilgrim Hiuen Tsiang, it contained ten Buddhist convents, with 300 monks and 10 temples. Half a century later Broach was a place of sufficient importance to attract some of the earliest Musalmān expeditions against Western India. Under the Rājput dynasties of Anhilvāda (A. D. 750–1300) Broach was a flourishing seaport. During the troubles that followed the overthrow of the Anhilvāda kings, the city would seem to have changed hands on more than one occasion. But with the exception of two years (1534–6), during which it was held by the officers of the emperor Humāyūn, Broach remained (1391 to 1572) under the Musalmān dynasty of Ahmadābād. About this time the city was twice (1536 and 1546) plundered by the Portuguese, who, except for its streets 'so narrow most of them that two horsemen could not pass at the same time,' admired the city 'with its magnificent and lofty houses, with their costly lattices, the famous ivory and black-wood workshops, and its townsmen well skilled in mechanics—chiefly weavers, who make the finest cloth in the world' (*Decadas de Couto*, v. 325). In 1573 Broach was surrendered to Akbar by Muzaffar Shāh III, the last of the line of Ahmadābād kings. Ten years later Muzaffar Shāh recovered the city, but held it only for a few months, when it again fell into the hands of the emperor of Delhi. In 1616 a British factory, and about 1620 a Dutch factory, were established at Broach. In 1660 some of the fortifications of the city were razed to the ground by the order of Aurangzeb. In this defenceless state it was twice, in 1675 and 1686, plundered by the Marāthās. After the second attack Aurangzeb ordered that the walls should be rebuilt and the city named Sukhābād. In 1736 the Musalmān commandant of the port was raised by Nizām-ul-mulk to the rank of Nawāb. In April, 1771, an attempt on the part of the English to take Broach failed; but in November, 1772, a second force was sent against the city, and this time it was stormed and captured. In 1783 it was handed over to Sindhia, but was retaken in 1803 by the British, and since that time it has remained in their possession.

Broach has a high school with an attendance of 212, a middle school with 186 pupils, and 19 vernacular schools, 11 for boys with 1,636 pupils and 8 for girls with 761. The municipality, established in 1852, had an average income of a lakh during the decade ending 1901. In 1903–4 the income was Rs. 91,000, chiefly derived from octroi (Rs. 50,000). Besides the ordinary Government revenue offices, the city con-

tains a Sub-Judge's court, a civil hospital, a library, and a railway dispensary.

The city has been surveyed, with a view to protect the rights of both the Government and the public. The drinking-water used by the inhabitants of the intramural quarters comes in part from the Narbadā. There are also many good wells in the city; and, unlike Surat and Ahmadābād, the custom of having cisterns in dwelling-houses for the storage of rain-water is not general.

Broach is one of the oldest seaports in India. Eighteen hundred years ago it was a chief seat of the commerce then carried on between India and the ports of Western Asia. In more recent times, though the trade of Gujarāt has never again centred in the harbours of this District, Broach so far maintained its position that in the seventeenth century it sent ships eastward to Java and Sumatra, and westward to Aden and the Red Sea. Later on the foreign trade of Gujarāt collected in Surat, until from Surat it was transferred to Bombay. The cotton formerly exported from Broach to China and Bengal was sent through Surat and Bombay; and as far back as 1815 the Broach ports ceased to have any foreign commerce. They now possess only a coasting trade south to Bombay and the intermediate ports, and north as far as Māndvi in Cutch. The total value of the sea-borne trade of Broach in 1903-4 was 31 lakhs, of which 18 lakhs represented imports and 13 lakhs exports. The chief articles of trade with the south are, exports—flowers of the *mahuā* tree, wheat, and cotton; imports—molasses, rice, betel-nuts, timber, coal, iron, and coco-nuts. To the west and north the exports are grain, cotton seed, *mahuā* flowers, tiles, and firewood; the imports, chiefly stone for building.

In ancient times cloth is mentioned as one of the chief articles of export from Broach; and in the seventeenth century, when the English and Dutch first settled in Gujarāt, it was the fame of its cloth manufactures that led them to establish factories at Broach. The kinds of cloth for which Broach was specially known at that time would seem to have been *baftas*, broad and narrow dimities, and other fine calicoes. The gain to the European trader of having a factory at Broach was that he might 'oversee the weavers, buying up the cotton yarn to employ them all the rains, when he sets on foot his investments, that they may be ready against the season for the ships.' About the middle of the seventeenth century the District is said to have produced more manufactures, and those of the

finest fabrics, than the same extent of country in any other part of the world, not excepting Bengal. In consequence of the increasing competition of the produce of steam factories in Bombay, Ahmadābād, and Broach itself, hand-loom weaving in Broach has greatly declined. There are four cotton-spinning and weaving mills, with a nominal capital (in 1904) of 14 lakhs, and containing 859 looms and 62,000 spindles. The out-turn of yarn and cloth is 5·4 and 3·1 million pounds, and 2,212 persons are employed.

Hānsot.—Town in the Anklesvar *tāluka* of Broach District, Bombay, situated in 21° 35′ N. and 72° 48′ E., on the left bank of the Narbadā, about 15 miles south-west of Broach city. Population (1901), 3,925. Hānsot was formerly the head-quarters of a *tāluka* of the same name, acquired by the British in 1775, restored to the Peshwā in 1783, and again acquired in 1803. The municipality, established in 1889, had an average income of about Rs. 5,000 during the decade ending 1901. In 1903–4 the income was Rs. 4,377. The town contains a dispensary and four schools, three (including an English school) for boys and one for girls, attended respectively by 245 and 35 pupils.

Jambusar Town.—Head-quarters of the *tāluka* of the same name in Broach District, Bombay, situated in 22° 3′ N. and 72° 48′ E., 5 miles north of the Dhādhar river, and 27 miles from Broach city. Population (1901), 10,181. The town was first occupied by the British in 1775 and remained in their possession until 1783, when it was restored to the Marāthās. Under the Treaty of Poona (1817) it was finally surrendered to the British. To the north of the town is a lake of considerable size sacred to Nāgeshwar, the snake-god, with richly wooded banks, and in the centre of the water rises a small island about 40 feet in diameter, overgrown with mango and other trees. The water-supply is chiefly derived from this tank. In the town is a strong fort, erected by Mr. Callender when Jambusar was held by the British from 1775 to 1783. This fort furnishes accommodation for the treasury, the civil courts, and other Government offices. The town contains a Sub-Judge's court, a dispensary, and seven schools—six (including an English school) for boys and one for girls—attended respectively by 553 and 106 pupils.

The municipality, established in 1856, had an average income of about Rs. 12,000 during the decade ending 1901. In 1903–4 the income was Rs. 13,900, including a grant of Rs. 2,000 from Government for education. In former times,

when Tankāri, 10 miles south-west of Jambusar, was a port of little less consequence than Broach, Jambusar itself enjoyed a considerable trade. Indigo was then the chief export. With the opening of the railway (1861), the traffic by sea at Tankāri fell off considerably. On the other hand, Jambusar is only 18 miles distant from the Pālej station on the Bombay, Baroda, and Central India Railway; and, as roads have been made connecting Jambusar with both Pālej and Broach, a traffic by land has to some extent taken the place of the old sea-borne trade. It is in contemplation to connect Broach and Jambusar by rail. There are six cotton-ginning factories. Tanning, the manufacture of leather, and calico-printing are carried on to a small extent, and there are also manufactures of ivory armlets and toys.

Kadod.—Place of Hindu pilgrimage in the Broach *tāluka* of Broach District, Bombay, situated in 21° 44′ N. and 73° 8′ E., on the right bank of the Narbadā, about half-way between the city of Broach and Suklatīrtha. The site of the fair is a very small hamlet with only twelve houses and a population (1901) of 53. The ceremonies, which occur once in every nineteen years when Vaishākh (April–May) happens to be the intercalary month, are in honour of Mahādeo, under the name of Koteshwar or Kotilingeshwar, and last for a whole month. Mr. Williams in his Memoir on Broach mentions that one of the periodical gatherings took place in 1812. In that year the total number of visitors was estimated at 200,000, and the most perfect order and good conduct are said to have been maintained by the crowd. In 1869 people began to collect on April 13, and all was not over till May 11; the greatest attendance at any one time was estimated at 100,000, and the total throughout the whole month at 500,000. The last fair was held in 1888, when the bed of the river was crowded with *lingams*, which the people in many cases carried away to their homes. During the time of the fair the pilgrims live in sheds and temporary huts. The Narbadā flows close by the site of the fair; but as the gathering takes place in the hot season, and below the limit of the tide, fresh water is hard to obtain. There is a temple at Kadod consisting of one chamber about 11 feet square, and entered by a door 5 feet 2 inches high and 3 feet 3 inches wide.

Suklatīrtha (or Shukla Tīrth).—Village in the Broach *tāluka* of Broach District, Bombay, situated in 21° 45′ N. and 73° 7′ E., on the northern bank of the Narbadā, 10 miles from Broach city. Population (1901), 2,348. The most important

fair in the District is held here every year, about November, on the occasion of the full moon of the month Kārtik. It lasts for five days, and on an average 25,000 people attend. Within a short distance of each other are three sacred *ghāts*, or *tīrthas* —the Kāvitīrtha, the Hunkāreshwartīrtha, and the Suklatīrtha. There is a temple at Hunkāreshwartīrtha. The name of Hunkāreshwar is said to have been given to the god because with a cry of 'hun' the image came up from the water of the Narbadā.

The following is the legendary account of the discovery of Suklatīrtha. In former times men were aware that somewhere on earth was a spot holy enough to purify from all sin; but none, even the wisest, knew where it lay. A certain king of Ujjain, Chānakya, growing old and thinking over the evil of his life, longed to find out this Suklatīrtha, or purifying spot. He therefore told the crows, whose feathers were at that time white, and who alone of birds had leave to enter the realms of the gods, to fly to Yama, the ruler of the infernal regions, and to tell him that king Chānakya was dead. The crows were to listen to the plans of the god Yama for the treatment of the king's soul, and were to discover from his words the locality of Suklatīrtha. They were able, on their return, to tell the king to start down the stream of the Narbadā, in a black-sailed boat, and when the blackness left his sail and it became white, he might know that he had reached his goal. The king obeyed; and after passing down-stream for several days, looking in vain for a change in the colour of his sail, he suddenly saw it flash white and knew that his journey was over. Leaving his boat he went on shore, bathed, and was purified. Yama, however, hearing of the deception practised upon him, was angry, and, forbidding the crows to appear again in the realms of the gods, tarnished their plumage with stains, from which till this day they have failed to free themselves. There is more than one instance in legend or ancient history of men in high position coming to Suklatīrtha for purification. Perhaps the best known is that of Chandragupta and his minister Chānakya, coming to be cleansed from the guilt of the murder of Chandragupta's eight brothers. So, also, in the beginning of the eleventh century, Chāmund, king of Anhilvāda, heart-broken at the loss of his eldest son, came as a patient to Suklatīrtha and remained there till he died. The ceremony of launching a boat with black sails in the hope of absolution from sin was, as noticed by Mr. Forbes, once practised at Suklatīrtha. But the pilgrims of these days use instead

of a boat a common earthen jar containing a lighted lamp, which, as it drifts down the stream, carries away with it their guilt.

Surat District.—District in the Northern Division of the Bombay Presidency, lying between 20° 17′ and 21° 28′ N. and 72° 35′ and 73° 29′ E., with an area of 1,653 square miles. It is bounded on the north by Broach District and the State of Baroda; on the east by the States of Baroda, Rājpīpla, Bānsda, and Dharampur; on the south by Thāna District and the Portuguese territory of Damān; and on the west by the Arabian Sea. A broad strip of Baroda (Gaikwār's) territory separates the north-western from the south-eastern portion of the District.

Boundaries, configuration, and hill and river systems.

Surat District consists of a wide alluvial plain, stretching between the Dāng hills and the coast, from the Kīm river on the north to the Damāngangā on the south, a distance of about 80 miles. The coast-line runs along the Arabian Sea where it begins to narrow into the Gulf of Cambay. Small hillocks of drifted sand fringe the greater part of the shore; in some parts dry and barren, but in others watered by springs, enclosed by hedges, and covered with a thick growth of creepers and date-palms. Through the openings of the river mouths, however, the tide runs up behind the barrier of sand-hills, and floods either permanently or temporarily a large area (estimated at 100,000 acres in 1876 and at 12,019 acres in 1904) of salt marshes. Beyond spreads a central alluvial belt of highly cultivated land, with a width of about 60 miles in the north, where the river Tāpti, carrying down a deposit of loam, forms a deep and fertile tract; but as the coast-line trends towards the south, the hills at the same time draw nearer to the coast, and restrict the alluvial country to a breadth of little more than 15 miles on the Damān border. The deep loam brought down by the Tāpti gives a level aspect to the northern tract; but farther south, a number of small and rapid rivers have cut themselves ravine-like beds, between which lie rougher uplands with a scantier soil and poorer vegetation. In the hollows, and often on the open plain, rich deposits of black cotton soil overlie the alluvium. The eastern border of the District consists of less fruitful lands, cut up by small torrents, and interspersed with mounds of rising ground. Here the huts of an ill-fed and almost unsettled peasantry replace the rich villages of skilled cultivators in the central lowland. On the border, this wild region passes gradually into the hills and forests of the DĀNGS, an unhealthy jungle which none but the

aboriginal tribes can inhabit save at special periods of the year. The Dāngs are leased from Bhīl chiefs.

The average elevation of the District is not much more than 150 feet above sea-level. In the north are chains of flat-topped hills which reach a height of between 200 and 300 feet; south of the Tāpti a series of high lands separate the plains of Surat from those of Khāndesh. Five miles from the ruined fort of Pārdi is the hill of PĀRNERA, with an estimated elevation of 500 feet above the sea. Except the Kīm and the Tāpti in the north, the District has no large rivers; but in the south are deep and navigable creeks, which form admirable outlets for produce, and provide a secure shelter to the smaller coasting craft. The Kīm rises in the Rājpīpla hills and, after a course of 70 miles, falls into the Gulf of Cambay. Its waters are useful for neither navigation nor irrigation. The Tāpti gives rise to the largest alluvial lowland in the District; but its frequent floods have caused great loss of life and damage to property. The course of this river through Surat District is 50 miles in a direct line, but 70 miles including windings. For 32 miles it is tidal, and passes through a highly cultivated plain, but it is navigable only as far as Surat, 20 miles from its mouth. The Warli is a considerable tributary. Of creeks, the northernmost formed by the Sīna river has on its right bank, about 4 miles from the coast, the harbour of Bhagva. Farther south, about 8 miles north of the Tāpti mouth, the Tena creek runs inland for about 8 miles. Four miles north of the Ambika in the west of Jalālpur is the large inlet known as the Kanai creek. The District contains no natural lakes, but reservoirs or tanks cover a total area of 16 square miles. With one exception they consist of small ponds, formed by throwing horseshoe embankments across the natural lines of drainage, and are used for irrigation. The reservoir at Pālan has an area of 153 acres.

Geology. Three geological formations occur in the lands of Surat District. Of these, the lowest is the Deccan trap; the middle is the Tertiary, represented by gravel, conglomerates, sandstone, and limestone, with and without Nummulites; the highest is the recent, represented by cotton soil, alluvium, and river-beds. The Deccan trap extends from the hilly country on the east as far west as Tadkesar, about 22 miles north-east of the city of Surat. From Tadkesar, though its limit is concealed by the alluvium of the plains, the trap appears to strike south-by-west, coming out upon the sea-shore near Bulsār. The formation consists mostly of basalt flows with

some intercalations of laterite, intersected by numerous dikes, most of them porphyritic. Intervening between the trap and the Tertiary is laterite, which is also interbedded with the lower beds of the Tertiary. The Tertiary includes representatives of the groups known in Sind as Upper Kīrthar (Spīntangi of Baluchistān), Gaj, and Manchhar (Siwāliks of the sub-Himālayas). The Tertiary beds spread in gentle undulations under a large portion of the District. In every case they form a fringe to the rocky trap country and border the alluvium of Gujarāt, by which on the west they are concealed. The lower beds of the series, those which correspond with the upper part of the Kīrthar group in Sind, are of middle eocene age (Lutetian). They contain bands of limestone, usually sandy and impure, abounding in Nummulites and other fossils, resting on laterite and containing numerous intercalations, towards their base, of ferruginous lateritic clays. The Nummulitic series includes beds of agate conglomerate, apparently of considerable thickness. The upper beds, including representatives of the Gaj and Manchhar, are principally of miocene age. They consist of gravel with a large proportion of agate pebbles, sandy clays, and calcareous sandstone, frequently nodular. The gravels are often cemented into a conglomerate. Fossils of both marine and terrestrial origin occur in some of the beds. Alluvium extends over a considerable portion of the District, concealing and covering up the rocks in the low ground, and forming the high banks which overhang all the larger streams at a little distance from the sea. Throughout almost the entire District the surface of the ground consists of 'black soil,' resulting from the decomposition of the basalt or of an alluvium largely made up of basaltic materials. In Surat, as in nearly all the lands surrounding the Gulf of Cambay, the wells often yield brackish water, owing to the presence of salt in the Tertiary sediments, principally in those of the upper division[1].

The common toddy-yielding wild date-tree grows more or less freely over the whole District. Near village sites and on garden lands, groves of mango, tamarind, banyan, *limbdo* (*Melia Azadirachta*), *pīpal* (*Ficus religiosa*), and other fruit and shade trees are commonly found. The mangoes of some Surat gardens approach the Bombay '*Alphonso*' and '*Pairi*' in flavour and sweetness. There are no good timber trees. The *babūl* is Botany.

[1] A. B. Wynne, 'Geological Notes on the Surat Collectorate,' *Records, Geological Survey of India*, vol. i, pp. 27-32; W. T. Blanford, 'Geology of the Taptee and Lower Nerbudda,' *Memoirs, Geological Survey of India*, vol. vi, pt. iii.

found in small bushes in most parts of the District, springing up freely in fields set apart for the cultivation of grass. Wild flowering-plants are not numerous, the commonest being *Hibiscus*, *Abutilon*, *Sida*, *Clerodendron*, *Phlomis*, *Salvadora*, *Celosia*, and *Leucas*.

Fauna. The fauna of Surat includes a few tigers, stragglers from the jungles of Bānsda and Dharampur, besides leopards (which are found throughout the District), bears, wild hog, wolves, hyenas, spotted deer, and antelope. Otters and grey foxes are also met with. Duck, wild geese, teal, and other wild-fowl abound during the cold season on the ponds and reservoirs; and hares, partridges, and quail are common.

Climate and temperature. The climate varies greatly with the distance from the sea. In the neighbourhood of the coast, under the influence of the sea-breeze, which is carried up the creeks, an equable temperature prevails; but from 8 to 10 miles inland the breeze ceases to blow. The temperature rises in places to 109° in April, the minimum being 44° in December. The mean temperature at Surat city is 82°.

Rainfall. The coast possesses a much lighter rainfall than the interior, the annual average ranging from 35 inches in Chorāsi to 72 inches in Pārdi. The average at Surat city for the twenty-five years ending 1903 amounted to 39·5 inches. In the District it varies from 38 to 80 inches. Pārdi in the south and Māndvi in the north-east have a bad reputation for unhealthiness, as shown by the proverb, 'Bagvāda is half death; Māndvi is whole death.'

History. Surat was one of the earliest portions of India brought into close relations with European countries, and its history merges almost entirely into that of its capital, long the greatest maritime city of the peninsula. Ptolemy, the Greek geographer (A.D. 150), speaks of the trade centre of Pulipula, perhaps Phulpāda, the sacred part of Surat city. The city itself appears to be comparatively modern, though the Musalmān historians assert that at the commencement of the thirteenth century Kutb-ud-dīn, after defeating Bhīm Deo, Rājput king of Anhilvāda, penetrated as far south as Rānder and Surat. The District then formed part of the dominions ruled over by a Hindu chief, who fled from his fortress at Kānrej, 13 miles east of Surat city, and submitted to the Musalmān conqueror, so obtaining leave to retain his principality. In 1347, during the Gujarāt rebellion in the reign of Muhammad bin Tughlak, Surat was plundered by the troops of the king. In 1373 Fīroz Tughlak built a fort at Surat to protect the place against the Bhīls. During the

fifteenth century no notice of Surat occurs in the chronicles of the Musalmān kings of Ahmadābād. Tradition generally assigns the foundation of the modern city to the beginning of the sixteenth century, when a rich Hindu trader, Gopī by name, settled here, and made many improvements. As early as 1514 the Portuguese traveller Barbosa describes Surat as a very important seaport, 'frequented by many ships from Malabar and all other parts.' Two years before the Portuguese had burnt the town, an outrage which they repeated in 1530 and 1531. Thereupon the Ahmadābād king gave orders for building a stronger fort, completed about 1546. In 1572 Surat fell into the hands of the Mirzas, then in rebellion against the emperor Akbar. Early in the succeeding year Akbar arrived in person before the town, which he captured after a vigorous siege. For 160 years the city and District remained under the administration of officers appointed by the Mughal court. During the reigns of Akbar, Jahāngīr, and Shāh Jahān, Surat enjoyed unbroken peace, and rose to be one of the first mercantile cities of India. In Akbar's great revenue survey the city is mentioned as a first-class port, ruled by two distinct officers.

After 1573 the Portuguese remained undisputed masters of the Surat seas. But in 1608 an English ship arrived at the mouth of the Tāpti, bringing letters from James I to the emperor Jahāngīr. Mukarrab Khān, the Mughal governor, allowed the captain to bring his merchandise into the town. Next year a second English ship arrived off Gujarāt, but was wrecked on the Surat coast. The Portuguese endeavoured to prevent the shipwrecked crew from settling in the town, and they accordingly went up to Agra with their captain. In 1609 the son of the last Musalmān king of Ahmadābād attempted unsuccessfully to recover Surat from the Mughals. Two years later a small fleet of three English ships arrived in the Tāpti; but as the Portuguese occupied the coast and entrance, the English admiral, Sir H. Middleton, was compelled to anchor outside. Small skirmishes took place between the rival traders, until in the end the English withdrew. In 1612, however, the governor of Gujarāt concluded a treaty, by which the English were permitted to trade at Surat, Cambay, Ahmadābād, and Gogha. After a fierce fight with the Portuguese, they made good their position, established their first factory in India, and shortly afterwards obtained a charter (*farmān*) from the emperor. Surat thus became the seat of a presidency of the East India Company. The Company's ships usually anchored in a roadstead north of the mouth of the Tāpti, called in old

books 'Swally' or 'Swally Hole,' but correctly Suvālī. Continued intrigues between the Portuguese and the Mughals made the position of the English traders long uncertain, till Sir Thomas Roe arrived in 1615, and went on to Ajmer, where Jahāngīr then held his court. After three years' residence there, Roe returned to the coast in 1618, bringing important privileges for the English. Meanwhile the Dutch also had made a settlement in Surat, and obtained leave to establish a factory.

Early travellers describe the city as populous and wealthy, with handsome houses and a busy trade. The fifty years between the establishment of the English and Dutch and the accession of Aurangzeb were remarkable for increasing prosperity. With the access of wealth the city improved greatly in appearance. During the busy winter months lodgings could hardly be obtained owing to the influx of people. Caravans passed between Surat and Golconda, Agra, Delhi, and Lahore. Ships arrived from the Konkan and the Malabar coast; while from the outer world, besides the flourishing European trade, merchants came from Arabia, the Persian Gulf, Ceylon, and Acheen in Sumatra. Silk and cotton cloth formed the chief articles of export. European ships did not complete the lading and unlading of their cargoes at Surat; but having disposed of a part of their goods, and laid in a stock of indigo for the home market, they took on board a supply of Gujarāt manufactures for the eastern trade, and sailed to Acheen and Bantam, where they exchanged the remainder of their European and Indian merchandise for spices. The Dutch in particular made Surat their principal factory in India, while the French also had a small settlement here.

Under Aurangzeb the District suffered from frequent Marāthā raids, which, however, did little to impair its mercantile position. The silting up of the head of the Cambay Gulf, the disturbed state of Northern Gujarāt, and the destruction of Diu by the Maskat Arabs in 1670, combined to concentrate the trade of the province upon Surat. Its position as 'the gate of Mecca' or the 'blessed port' (*Bandar Mubarak*) was further increased in importance by the religious zeal of Aurangzeb. But the rise of the predatory Marāthā power put a temporary check on its prosperity. The first considerable Marāthā raid took place in 1664, when Sivajī suddenly appeared before Surat, and pillaged the city unopposed for three days. He collected in that short time a booty estimated at a million sterling. The English and Dutch factories were bravely defended by their inmates, who succeeded in saving a portion of the city. Encouraged by this

success, the Marāthā leader returned in the year 1669, and once more plundered Surat. Thenceforward for several years a Marāthā raid was almost an annual certainty. The Europeans usually retired to their factories on these occasions, and endeavoured, by conciliating the Marāthās, to save their own interests. Nevertheless the city probably reached its highest pitch of wealth during this troublous period at the end of the seventeenth century. It contained a population estimated at 200,000 persons, and its buildings, especially two handsome mosques, were not unworthy of its commercial greatness. In 1695 it is described as 'the prime mart of India,—all nations of the world trading there; no ship trading in the Indian Ocean but what puts into Surat to buy, sell, or load.'

But the importance of Surat to the English East India Company declined considerably during the latter part of Aurangzeb's reign, owing partly to the growing value of Bombay, and partly to disorders in the city itself. In 1678 the settlement was reduced to an agency, though three years later it once more became a presidency. In 1684 orders were received to transfer the chief seat of the Company's trade to Bombay—a transfer actually effected in 1687. During the greater part of this period the Dutch were the most successful traders in Surat.

From the death of Aurangzeb in 1707, the authority of the Delhi court gradually declined, and the Marāthās established their power up to the very walls of Surat. The governors nominally appointed by the Mughals employed themselves chiefly in fighting with the Hindu intruders for the country just beyond the gates. At length, in 1733, Teg Bakht Khān, governor of the city, declared himself independent; and for twenty-seven years Surat remained under a native dynasty. For the first thirteen years of this period Teg Bakht Khān maintained unbroken control over the city; but after his death in 1746 complete anarchy for a time prevailed. The English and Dutch took an active part in the struggles for the succession, sometimes in concert and sometimes as partisans of the rival competitors. In 1759 internal faction had rendered trade so insecure that the authorities at Bombay determined to make an attack upon Surat, with the sanction of the Marāthās, now practically masters of Western India. After a slight resistance the governor capitulated, and the English became supreme in Surat. For forty-one years the government of the new dependency was practically carried on by the conquerors, but the governors or Nawābs still retained a show of independence until 1800. The earlier years of English rule brought pros-

perity again to the city, which increased in size, owing partly to the security of British protection and partly to the sudden development of a great export trade in raw cotton with China. The population of the city was estimated at 800,000 persons, though this figure is doubtless excessive. Towards the close of the century, however, the general disorder of all Central and Western India, and the repeated wars in Europe, combined to weaken its prosperity. Two local events, the storm of 1782 and the famine of 1790, also contributed to drive away trade, the greater part of which now centred in Bombay.

In 1799 the last nominally independent Nawāb died, and an arrangement was effected with his brother by which the government became wholly vested in the British, the new Nawāb retaining only the title and a considerable pension. The political management of Surat, up to May 14, 1800, had first been under an officer styled 'Chief for the Affairs of the British Nation, and Governor of the Mughal Castle and Fleet of Surat,' and subsequently under a lieutenant-governor. The last of these was Mr. Daniel Seton, whose monument is in the cathedral at Bombay. By the proclamation of Jonathan Duncan, dated May 15, 1800, Surat District was placed under a Collector, Mr. E. Galley, and a Judge and Magistrate, Mr. Alexander Ramsay, one of whom, generally the Judge, was also in political charge of the titular Nawāb and the small chiefs in the neighbourhood as Agent to the Governor of Bombay. The arrangements of 1800 put the English in possession of Surat and Rānder. Subsequent cessions under the Treaties of Bassein (1802) and Poona (1817), together with the lapse of the Māndvi State in 1839, brought the District into its present shape. The title of Nawāb became extinct in 1842. Since the introduction of British rule Surat has remained free from external attacks and from internal anarchy, the only considerable breach of the public peace having been occasioned by a Musalmān disturbance in 1810. During the Mutiny of 1857 Surat enjoyed unbroken tranquillity, due in great measure to the steadfast loyalty of its leading Muhammadan family, that of the late Saiyid Edroos.

Archaeology.

The District contains many buildings upwards of three centuries old. Some of the mosques have been constructed out of Jain temples, as, for example, the Jāma Masjid, the Miān, Kharwa, and Munshi's mosque at Rānder. Specimens of excellent wood-carving are to be found on many of the older houses in Surat city. There are famous Dutch and English cemeteries outside the city. Vaux's tomb at the mouth of the

Tāpti deserves mention. The tomb bears no inscription, but in the upper part is a chamber used by the English in former times as a meeting-place for parties of pleasure. Vaux was a book-keeper to Sir Josia Child, and finally rose to be Deputy-Governor of Bombay. He was drowned in the Tāpti in 1697.

The people.

The Census of 1851 returned the total number of inhabitants at 492,684. The population at each of the last four enumerations was: (1872) 607,087, (1881) 614,198, (1891) 649,989, and (1901) 637,017. The decline in the last decade was due to the famine of 1899–1900. The area, population, &c., of the eight *tālukas* in 1901 are given in the following table:—

Tāluka.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Olpād . .	323	1	118	58,748	182	− 12	10,328
Māndvi . .	279	1	136	42,450	152	− 21	2,768
Chorāsi . .	102	2	65	169,100	1,658	+ 6	35,121
Bārdoli . .	222	1	123	80,678	363	− 4	8,841
Jalālpur .	188	...	91	81,182	432	+ 3	10,362
Chikhli . .	168	1	61	59,692	355	− 8	4,911
Bulsār . .	208	1	95	83,476	401	− 5	7,808
Pārdi . .	163	1	81	61,691	378	− 6	5,554
District total	1,653	8	770	637,017	385	− 2	85,693

The District contains 770 villages and 8 towns, the largest being SURAT CITY, the head-quarters and chief commercial centre, BULSĀR, RĀNDER, BĀRDOLI, and PĀRDI. The density of population is 385 persons per square mile, and it thus stands second for density among the 24 Districts of the Presidency. The Māndvi *tāluka* is sparsely peopled, on account of the unhealthiness of the climate. The language in ordinary use is Gujarātī, spoken by 95 per cent. of the population. Hindus form 86 per cent. of the total; Musalmāns, 8 per cent.; Pārsīs and Jains, 2 per cent. each.

Castes and occupations.

The chief cultivating castes are the Anavla Brāhmans (25,000), Kunbīs (38,000), and Kolīs (100,000). Rājputs (9,000), Musalmān Bohrās (15,000), and a few Pārsīs are also to be found among agriculturists. Of the aboriginal races, Dublas (78,000) with their numerous sections, Dhodias (51,000), and Chodhras (30,000) are the most important. The leading artisan classes are Ghānchis (oilmen, 12,000), Golas (rice-huskers, 8,000),

Khattrīs (weavers, 11,000), and Kumbhārs (potters, 11,000). The Vānīs or traders number 12,000. Among depressed classes, the Dhers (30,000) are numerically important. The Dhers of Surat are active and intelligent, and are largely employed by Europeans as domestic servants. Surat, in spite of the commercial importance of its chief town, is still essentially a rural District. Nearly 60 per cent. of the population are supported by agriculture, while the industrial class forms 35 per cent.

Christian missions.

The Christian population of Surat District in 1901 was 1,092. Of these, about 600 are native Christians. A branch of the Irish Presbyterian Mission has been established in Surat city since 1846, and maintains 2 high schools, 18 primary schools, an orphanage with 125 inmates, and a printing-press, established by the London Missionary Society in 1820, which published thirty-six English and vernacular books in 1904. In 1894 the Dunker Brethren, an American mission, was established at Bulsār, and now maintains an orphanage, a technical school, and several village schools.

General agricultural conditions.

The soils, all more or less alluvial in character, belong for agricultural purposes to three chief classes: black, light, and the *besar* or medium. Apart from the Olpād *tāluka*, where black soil is most common, two broad belts of black soil run through the District. Of these, one passes along the sea-coast, the other through the Pārdi and Chikhli *tālukas* near the foot of the eastern hills. Light soil is commonest near the banks of the Tāpti, Ambika, and Auranga rivers. This is the richest soil of the District, producing in rapid succession the most luxuriant crops. Patches of *besar* are to be found in almost every part of the District. The most striking feature in agriculture is the difference between the tillage of the *ujli* or fair races, and that of the *kāla* or dark aboriginal cultivators. The dark races ordinarily use only the rudest processes; grow little save the coarser kinds of grain, seldom attempting to raise wheat or millet; and have no implements for weeding or cleaning the fields. After sowing their crops they leave the land, and only return some months later for the harvest. As soon as they have gathered in their crops, they barter the surplus grain for liquor. In the more settled parts of the District, however, the dark races are now improving their mode of tillage. The fair cultivators, on the other hand, who own the rich alluvial soil of the lowlands, are among the most industrious and intelligent in Western India.

The District is almost entirely *ryotwāri*, with some *inām* lands. The chief statistics of cultivation in 1903-4 are shown below, in square miles:— Chief agricultural statistics and principal crops.

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Olpād	312	190	5	9	...
Māndvi	280	150	...	31	63
Chorāsi	114	83	1	2	...
Bārdoli	222	195	2	2	1
Jalālpur	186	120	4	5	...
Chikhli	168	133	4	13	1
Bulsār	208	162	4	10	4
Pārdi	163	141	2	1	3
Total	1,653*	1,174	22	73	72

* The area for which statistics are not available is 36 square miles. The figures of area are based upon the latest information.

Rice and *jowār* are the staple crops, with an area of 157 and 172 square miles respectively. Rice is grown chiefly on the black or red soil in the neighbourhood of tanks or ponds, with *vāl* or castor as a second crop. *Jowār* is largely grown in the northern part of the District. Cotton covers 154 square miles, chiefly in the Tāpti valley; it is also spreading south. *Kodra* forms the food of the poorest classes. Among pulses the most important is *tur* (37 square miles); *vāl* occupies 74 square miles. Wheat and *bājra* occupy 56 and 14 square miles respectively. In the south of the District castor is extensively cultivated.

Efforts have from time to time been made to improve the staple of the local cotton, and an improved variety of sugar-cane from Mauritius was introduced in 1836. It is now the favourite crop in irrigated land in the Jalālpur and Bulsār *tālukas*. There is an experimental farm in the District, but the results so far attained are not sufficiently important to claim notice. During the decade ending 1903-4, nearly 9 lakhs was advanced to cultivators for land improvements and the purchase of seed and cattle, of which 4·1 lakhs was lent in 1899-1900 and 2·5 lakhs in the two succeeding years. Improvements in agricultural practice.

The indigenous or *talabda* bullock is generally of medium size, and is used chiefly for agricultural purposes. The large muscular bullocks or *hedia* are brought from Northern Gujarāt. A third class of bullock, small but hardy and a quick mover, is much used in harness. The cows and buffaloes of the District are greatly esteemed—the cows for their appearance and the buffaloes for their yield of milk. The Bulsār *tāluka* Cattle and goats.

is famous for its breed of *patiri* goats, which are good milkers, and are highly prized in Bombay.

Irrigation. Of the total cultivated area, 22 square miles, or 3 per cent., were irrigated in 1903-4: 13 from tanks and 9 from wells. The chief sources are: Government works, 301 in number; wells, 7,147; tanks, 1,114: 'others,' 42. Of the total irrigated area, about 3,200 acres are under sugar-cane.

There are no fresh-water fisheries, but the rivers contain fish of large size. The sea fisheries employ a fleet of many hundred boats.

Forests. Though on the whole well clothed with trees, the District does not possess many revenue-yielding trees, except toddy-palms, which are tapped for liquor. In the Chikhli *tāluka* a small area under teak has been set apart as a forest Reserve. A rough hilly tract in the east and north-east of Māndvi is the only area suitable for forest. The total area of forests is 72 square miles, which is almost entirely in the charge of the Forest department, represented by a divisional Forest officer assisted by an Extra-Assistant Conservator. The forest revenue in 1903-4, including the revenue from the Dāngs, was Rs. 37,500.

Mines and minerals. Surat is well supplied with building stone. Good material for road-metal, though scarce, can be obtained at from Rs. 3 to Rs. 3½ per 100 cubic feet from Pārdi and Bulsār. Iron-stone is common, but iron is not worked. Metallic sand accumulates at the mouths of rivers, and is used instead of blotting-paper by the writing classes. Agate or carnelian, locally known as *hakik*, is obtained from the trap and sold to the lapidaries of Cambay.

Arts and manufactures. The brocades of Surat, worked with gold and silver flowers on a silk ground, had a reputation in former times. Surat city was also famed for its coarse and coloured cottons, while Broach had a name for muslins. From Surat likewise came elegant targets of rhinoceros hide, which was brought over from Africa, and polished in Surat until it glistened like tortoise-shell. The shield was studded with silver nails and then sold at a price varying from Rs. 30 to Rs. 50. Ship-building was at one time an important industry, to a great extent in the hands of the Pārsīs. The largest vessels were engaged in the China trade, and were from 500 to 1,000 tons burden. Many of the ships were built on European lines. They were mostly manned by English crews and flew the English flag. The sea-borne trade from the ports has greatly fallen off of late years. The industries of Surat city suffered from the damage done to the houses and workshops in the

great fire of 1889, when property valued at 25 lakhs was destroyed. At the present time the weaving of cotton and silk goods is the chief industry of the District. There are three steam mills in Surat city, containing 34,290 spindles and 180 looms, which spin and weave annually nearly 3 million pounds of cotton yarn and about half a million pounds of cotton cloth. They employ 1,288 persons. Except among the aboriginal tribes, hand-weaving is everywhere common. Silk brocades and embroideries are still manufactured in Surat city. They have a widespread reputation, and exhibit skill of a high order. Nowhere in the Presidency are finer fabrics woven on hand-looms. There is one salt-work in the District, which yields annually 300,000 maunds, valued at 6½ lakhs.

Trade centres chiefly in the towns of Surat and Bulsār, as well as in the seaport of Bilimorā (Baroda territory). The total value of the exports from the seven seaports which afforded an outlet for the produce of the District in 1874 amounted to nearly 44½ lakhs, and that of the imports to 7 lakhs. These figures include the value of commodities shipped and received at Baroda ports. The two principal seaports are Surat city and Bulsār. In 1903-4 the value of the exports from these taken together was 13 lakhs; and of the imports about 18 lakhs. The exports include grain, cotton, pulse, *mahuā* fruit, timber, and bamboos; the imports include tobacco, cotton-seed, iron, coco-nuts, and European goods. Commerce.

There are 462 miles of road, of which 100 miles are metalled, connecting the principal towns with the railway. Of the metalled roads, 2½ miles of Provincial and 70½ of Local roads are maintained by the Public Works department. Avenues of trees are maintained along 190 miles. The only important bridges for cart traffic are those over the Tāpti at Surat, and over the Tena creek near Olpād. The Bombay, Baroda, and Central India Railway runs through the District parallel to the coast for about 60 miles, crossing the Tāpti at Surat city on a fine iron-girder bridge. The Tāpti Valley Railway, 155 miles in length, which joins Surat to the Great Indian Peninsula system at Amalner in Khāndesh District, was opened in 1900. It traverses the District for 11 miles. Communications. Railways and roads.

History records severe famine in the years 1623, 1717, 1747, and 1803. From the commencement of British rule, however, until 1899 no famine was sufficiently intense to cause suffering to the people. Owing to the failure of the late rains in 1899 distress rapidly developed; and, in December of that year, there were 4,700 persons on relief works. By March, 1900, Famine.

the number had increased to 15,000. In July, 1900, there were 35,000 on the works, including 29,000 in receipt of gratuitous relief. Surat, however, escaped the severity of the famine in the adjoining Districts. The total increase in the number of deaths from all causes during the famine was 30,000, and the population decreased 2 per cent. between 1891 and 1901. The total expenditure in connexion with famine relief in this and the adjacent District of Broach exceeded 48½ lakhs, and 4 lakhs of land revenue was remitted in Surat District. It is calculated that over 50,000 cattle perished in the drought. Floods on the Tāpti river have frequently caused great damage to SURAT CITY, in the article on which some particulars of the most disastrous floods are given.

District subdivisions and staff.

The District is divided into three subdivisions, in charge of an Assistant Collector and two Deputy-Collectors. It contains 8 *tālukas*: namely, BĀRDOLI, BULSĀR, CHIKHLI, CHORĀSI, JALĀLPUR, MĀNDVI, OLPĀD, and PĀRDI. Bārdoli includes the petty subdivision (*petha*) of Vālod. The Collector is Political Agent for Sachīn State, which is administered by the Assistant Collector, subject to his control. The States of Bānsda and Dharampur and the Dāngs estate are also under his political control, the Assistant Political Agent for the latter estate being the divisional Forest officer.

Civil and criminal justice.

The District and Sessions Judge, with whom is associated a Judge of a Small Cause Court, is assisted by one Assistant Judge and four Subordinate Judges, sitting one at Olpād, two at Surat, and one at Bulsār. There are twelve officers to administer criminal justice. The city of Surat forms a separate magisterial charge under a City Magistrate. The District is remarkably free from crime, offences against the excise law being the most numerous.

Land revenue administration.

At the time of annexation, the *girāsiās*, or large landowners of Surat, claimed, as the representatives of the original Hindu proprietors, a share of the land revenue, and levied their dues at the head of an armed force. In 1813 Government undertook to collect the amount of these claims by its own officers. In addition to the *girāsiās*, there were numerous *desais* or middlemen to whom the land revenue was farmed under the old régime. To decrease the power and influence of these *desais*, the British Government (1814) appointed accountants to each village, who collected the revenue direct from the cultivators, thus rendering the practice of farming unnecessary. No change was made in the old rates until 1833, when, in consequence of the fall in prices, they were revised and con-

siderably reduced. In 1836 committees were appointed to divide the soil into classes and fix equitable rates; and between 1863 and 1882 the survey settlement was introduced, which raised the total revenue demand from 18½ to 21½ lakhs. A revision was made between 1897 and 1905. The new survey found an excess in the cultivated area of 4 per cent. over the amount shown in the accounts, and the settlement enhanced the total revenue by nearly one lakh, or 4 per cent. The average rates of assessment are: 'dry' land, Rs. 2-11 (maximum scale, Rs. 7-8; minimum scale, R. 1); rice land, Rs. 8-1 (maximum scale, Rs. 7-8; minimum scale, Rs. 1-4); and garden land, Rs. 8-11 (maximum scale, Rs. 12, minimum scale, Rs. 5).

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	30,63	27,62	22,55	30,80
Total revenue . .	41,29	49,65	42,74	55,26

There are four municipalities in the District: namely, SURAT, RĀNDER, BULSĀR, and MĀNDVI. Outside of these, local affairs are managed by the District board and eight *tāluka* boards. The receipts of the local boards amounted in 1903-4 to about 3 lakhs, and the expenditure to 2½ lakhs, including one lakh spent on roads and buildings. Municipalities and local boards.

The District Superintendent of police is assisted by 2 inspectors. There are altogether 11 police stations. The total number of policemen is 881, under 11 chief constables, besides 14 mounted police under 2 *daffadārs*. There are 9 subsidiary jails and 9 lock-ups in the District, with accommodation for 208 prisoners. The daily average number of prisoners in 1904 was 69, of whom 5 were females. Police and jails.

Surat stands second among the twenty-four Districts of the Presidency for the literacy of its inhabitants, of whom 13·3 per cent. (24·5 males and 2·4 females) could read and write in 1901. In 1880-1 the District contained 293 schools with 19,363 pupils. The latter had increased to 28,658 in 1890-1, and to 31,902 in 1900-1. In 1903-4 the District possessed 480 schools, attended by 31,719 pupils, including 6,363 girls. Of these institutions, 6 are high schools, 26 middle, 341 primary, and one a special industrial school. Of the 374 public institutions, 2 are managed by Government, 312 by local or municipal boards, 36 are aided, and 24 unaided. The total expenditure Education.

on education in 1903–4 amounted to nearly $2\frac{1}{2}$ lakhs, of which 64 per cent. was devoted to primary education.

Hospitals and dispensaries. In 1904 the District possessed one hospital and twelve dispensaries, including one for women at Surat. These institutions contain accommodation for 120 in-patients. Including 1,541 in-patients, the number of persons treated in 1904 was 86,000, and the number of operations performed was 2,721. The expenditure on medical relief was Rs. 39,000, of which Rs. 17,000 was met from Local and municipal funds.

Vaccination. The number of persons successfully vaccinated in 1903–4 was 16,091, representing a proportion of 25·3 per 1,000 of the population, which is slightly above the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. ii (Surat and Broach) (1877).]

Olpād.—North-western *tāluka* of Surat District, Bombay, lying between 21° and 21° 28′ N. and 72° 35′ and 72° 57′ E., with an area of 323 square miles. The *tāluka* contains 118 villages and one town, Olpād (population, 3,275), the head-quarters. The population in 1901 was 58,748, compared with 66,668 in 1891. The density, 182 persons per square mile, is much below the District average. Land revenue and cesses in 1903–4 amounted to nearly 5·6 lakhs. Olpād forms an almost unbroken plain, and the fields are generally unenclosed owing to the low level and the inroads of the sea. Well-irrigation is possible only in a few of the eastern villages. The climate is generally healthy. The rainfall (39 inches) is less than in the rest of the District.

Māndvi Tāluka.—North-eastern *tāluka* of Surat District, Bombay, lying between 21° 12′ and 21° 27′ N. and 72° 59′ and 73° 29′ E., with an area of 279 square miles. The Tāpti river forms the southern boundary. There are 136 villages and one town, MĀNDVI (population, 4,142), the head-quarters. The population in 1901 was 42,450, compared with 53,942 in 1891. This is the most thinly populated *tāluka* in the District, and the density, 152 persons per square mile, is much below the average. Land revenue and cesses in 1903–4 amounted to over 1·8 lakhs. The western part of the *tāluka* is the most fertile and prosperous; in the east the population gradually becomes scanty and unsettled, and cultivation disappears. The climate is the worst in Surat District. In both ponds and wells the water-supply is defective and its quality bad. The staple crops are rice, cotton, and *jowār*.

Chorāsi.—Central *tāluka* of Surat District, Bombay, lying

between 21° 2′ and 21° 17′ N. and 72° 42′ and 72° 59′ E., with an area of 102 square miles. Chorāsi contains two towns, SURAT (population, 119,306), the District head-quarters, and RĀNDER (10,478); and 65 villages. The population in 1901 was 169,100, compared with 159,170 in 1891. Owing to the inclusion of the city, the density is as high as 1,658 persons per square mile. Land revenue and cesses in 1903–4 amounted to 2·8 lakhs. The *tāluka* forms a richly wooded plain, with highly cultivated fields enclosed with hedges. With the exception of the Tāpti, which forms the northern boundary for about 18 miles, there is no river of importance, and the water-supply is defective, owing to the smallness of the village reservoirs and the brackishness of the well water.

Bārdoli Tāluka.—*Tāluka* of Surat District, Bombay, lying between 20° 56′ and 21° 14′ N. and 73° 0′ and 73° 21′ E., with an area of 222 square miles. The population in 1901 was 80,678, compared with 84,111 in 1891. The *tāluka* contains one town, BĀRDOLI (population, 5,172), the head-quarters; and 123 villages. Land revenue and cesses in 1903–4 amounted to more than 5 lakhs. There are no alienated villages in Bārdoli, which forms a richly wooded plain, with stretches of grass land covered with date-palms and *babūl*-trees. Towards the west the *tāluka* has the benefit of the sea-breeze, and is well supplied with water. The climate of the eastern part is hotter and somewhat feverish.

Jalālpur Tāluka.—Central *tāluka* of Surat District, Bombay, lying between 20° 45′ and 21° 0′ N. and 72° 47′ and 73° 8′ E., with an area of 188 square miles. The population in 1901 was 81,182, compared with 78,649 in 1891, the average density being 432 persons per square mile. The *tāluka* contains 91 villages, Jalālpur being the head-quarters. Land revenue and cesses in 1903–4 amounted to over 3·6 lakhs. Jalālpur is a level plain of deep alluvial soil, sloping towards the sea, where it ends in a salt marsh. Along the coast-line low sandhills appear at intervals. With the exception of the salt lands near the coast, the country is rich, highly cultivated, and well supplied with water, groves of fruit trees, and valuable timber. The villages are large and prosperous. Besides the tract on the coast, there are extensive salt marshes along the banks of the Pūrna and Ambika rivers. The reclaimed land has been made to yield a small return of rice. *Jowār*, *bājra*, and rice are the staple crops. Miscellaneous crops are pulses, gram, oilseeds, sugar-cane, and plantains. The climate is mild and healthy throughout the year.

Chikhlī.—Eastern *tāluka* of Surat District, Bombay, lying between 20° 37′ and 20° 54′ N. and 72° 59′ and 73° 17′ E., with an area of 168 square miles. The population in 1901 was 59,692, compared with 61,315 in 1891. The *tāluka* contains 61 villages and one town, Chikhlī (population, 4,440), the head-quarters. Land revenue and cesses in 1903–4 amounted to 2·3 lakhs. Chikhlī consists of raised plateaux with intervening belts of low-lying land. The elevated tracts are seamed by rocky watercourses; the soil, being poor and shallow, is cultivated only in patches, and yields little but grass and brushwood. The low-lying lands between these elevations contain a very fertile soil, bearing superior crops of grain, sugar-cane, and fruit. The *tāluka* is watered by the Ambika, Kāveri, Kharera, and Auranga rivers, which flow through it from east to west.

Bulsār Tāluka.—Southern *tāluka* of Surat District, Bombay, lying between 20° 28′ and 20° 46′ N. and 72° 52′ and 73° 8′ E., with an area of 208 square miles. It contains one town, BULSĀR (population, 12,857), the head-quarters; and 95 villages. The population in 1901 was 83,476, compared with 87,889 in 1901. Land revenue and cesses in 1903–4 amounted to nearly 2·8 lakhs. There are no alienated villages in the *tāluka*. The whole surface is irregular, seamed with river-beds, and rising into rocky uplands. Situated on the sea-coast, the climate is considered healthy at all times of the year, but the eastern parts are malarious at certain seasons. Tithal, a village on the coast, is resorted to as a sanitarium by visitors from Bombay. The *tāluka* is abundantly watered by rivers and streams.

Pārdi Tāluka.—Southernmost *tāluka* of Surat District, Bombay, lying between 20° 17′ and 20° 32′ N. and 72° 50′ and 73° 7′ E., with an area of 163 square miles. It contains one town, PĀRDI (population, 5,483), the head-quarters; and 81 villages. The population in 1901 was 61,691, compared with 58,245 in 1891. Land revenue and cesses in 1903–4 amounted to nearly 1½ lakhs. The *tāluka* adjoins the Portuguese territory of Damān, and is for the most part an undulating plain sloping westwards to the sea. The fields are, as a rule, unenclosed. Pārdi is divided into an infertile and a fertile region by the Kolak river. Its climate has a bad reputation. The annual rainfall, averaging 72 inches, is the heaviest in the District.

Bārdoli Town.—Head-quarters of the *tāluka* of the same name in Surat District, Bombay, situated in 21° 7′ N. and 73°

7′ E., on the Tāpti Valley Railway, 19 miles from Surat city. Population (1901), 5,172. It has a temple of Kedāreshwar about four centuries old, on the site of a previously existing shrine of great antiquity. A fair, held annually, is attended by over 5,000 pilgrims. The town contains a dispensary and three schools, two for boys and one for girls, attended by 241 and 86 pupils respectively.

Bulsār Town (*Walsād, Valsād*).—Port and head-quarters of the *tāluka* of the same name in Surat District, Bombay, situated in 20° 37′ N. and 72° 56′ E., about 40 miles south of Surat and 115 north of Bombay, on the estuary of the navigable though small river Auranga, and on the railway between Surat and Bombay. Population (1901), 12,857. Of the Musalmāns, the greater number are Tais, or converted Hindus, who are engaged chiefly in cloth-weaving, and are, as a rule, well-to-do. The municipality dates from 1855. The income during the decade ending 1901 averaged Rs. 29,000; in 1903–4 it was Rs. 25,000. Bulsār is well placed for trade, both by sea and by land. The total value of its coast trade, exclusive of Government stores, in 1903–4 was 12 lakhs, of which 7½ lakhs represented the value of exports and 4½ lakhs that of imports. The chief imports are piece-goods, tobacco, wheat, fish, and sugar; the chief exports are timber, grain, molasses, oil, firewood, and tiles. The export of timber is the staple of Bulsār trade. The wood brought from the Dāng forests is exported by sea to Dholera, Bhaunagar, and other ports of Kāthiāwār. There are manufactures of cloth for wearing apparel, silk for women's robes, and of bricks, tiles, and pottery. The town contains a Sub-Judge's court, a dispensary, and two English schools, of which one is a high school, attended by 101 and 159 pupils. It has also nine vernacular schools, six for boys and three for girls, attended respectively by 412 and 219 pupils.

Māndvi Town.—Head-quarters of the *tāluka* of the same name in Surat District, Bombay, situated in 21° 18′ N. and 73° 22′ E. Population (1901), 4,142. The municipality was established in 1868. During the decade ending 1901 the income averaged Rs. 6,000; in 1903–4 it was Rs. 6,273. The town contains a dispensary and four schools, three (including an English school) for boys and one for girls, attended respectively by 302 and 58 pupils.

Pārdi Town.—Head-quarters of the *tāluka* of the same name in Surat District, Bombay, situated in 20° 31′ N. and 72° 57′ E., on the Bombay, Baroda, and Central India Railway. Population (1901), 5,483. The town contains a dispensary and three

schools, two (including an English school) for boys and one for girls, attended respectively by 230 and 94 pupils.

Pārnera Hill.—Hill in Surat District, Bombay, situated in 20° 34′ N. and 72° 57′ E., 4 miles south-east of Bulsār, and 120 miles north of Bombay, rising to a height of about 500 feet above the plain. From its commanding position the fortified summit has long been considered a place of consequence. Originally a Hindu fort, it remained under the Rājā of Dharampur, till, about the end of the fifteenth century, it was taken by Mahmūd Begara, Sultān of Gujarāt (1459–1511). The fort remained for some time under the charge of Musalmān commanders, but in the disorders that marked the close of the power of the Ahmadābād kings it fell into the hands of a chief of banditti. According to a Portuguese writer, Pārnera was twice (in 1558 and 1568) taken by expeditions from Damān, and on the second occasion the fortifications were destroyed. After it had been in ruins for more than a hundred years, the fort was, in April, 1676, taken and rebuilt by Moro Pandit, one of Sivajī's generals. For about a century Pārnera remained under the Marāthās. It was then (1780) captured by a detachment of English troops under Lieutenant Welsh. At first, as a protection against the raids of Pindāris, the fort was occupied by a military detachment; but early in the nineteenth century the garrison was removed, and during the Mutiny of 1857 the fort was dismantled.

Rānder.—Town in the Chorāsi *tāluka* of Surat District, Bombay, situated in 21° 13′ N. and 72° 48′ E., on the right bank of the Tāpti, 2 miles above Surat city. Population (1901), 10,478, including suburb. Rānder is supposed to be one of the oldest places in Southern Gujarāt. It is said to have been a place of importance about the beginning of the Christian era, when Broach was the chief seat of commerce in Western India. Albirūnī (1031) gives Rānder (Rāhanjhour) and Broach as dual capitals of South Gujarāt. In the early part of the thirteenth century a colony of Arab merchants and sailors is stated to have attacked and expelled the Jains, at that time ruling at Rānder, and to have converted their temples into mosques. Under the name of Nāyatās, the Rānder Arabs traded to distant countries. In 1514 the traveller Barbosa described Rānder as a rich and agreeable place of the Moors (Nāyatās), possessing very large and fine ships, and trading with Malacca, Bengal, Tawasery (Tennasserim), Pegu, Martaban, and Sumatra, in all sorts of spices, drugs, silk, musk, benzoin, and porcelain. In 1530 the Portuguese, after sacking Surat, took

Rānder. With the growing importance of Surat, Rānder declined in prosperity, and, by the close of the sixteenth century, became a port dependent on Surat. At present, Bohrās of the Sunni sect carry on trade westwards with Mauritius, and eastwards with Rangoon, Moulmein, Siam, and Singapore. By the opening of the Tāpti bridge in 1877 Rānder was closely connected with Surat city. The municipality, established in 1868, had an average income of about Rs. 20,000 during the decade ending 1901; in 1903-4 the income was Rs. 23,000. The town contains a dispensary, an English school with 47 pupils, and six vernacular schools, five for boys with 517 pupils and one for girls with 95.

Surat City.—Head-quarters of Surat District, Bombay, and the former seat of a Presidency under the East India Company, situated in 21° 12′ N. and 72° 50′ E., on the southern bank of the Tāpti river; distant from the sea 14 miles by water, 10 miles by land. It was once the chief commercial city of India, and is still an important mercantile place, though the greater portion of its export and import trade has long since been transferred to Bombay. Surat is a station on the Bombay, Baroda, and Central India Railway, 167 miles from Bombay.

During the eighteenth century Surat probably ranked as the most populous city of India. As late as 1797 its inhabitants were estimated at 800,000 persons; and though this calculation is doubtless excessive, the real numbers must have been very high. With the transfer of its trade to Bombay the numbers rapidly fell off. In 1811 an official report returned the population at 250,000 persons, and in 1816 at 124,406. In 1847, when the fortunes of Surat reached their lowest ebb, the number of inhabitants amounted to only 80,000. Thenceforward the city began to retrieve its position. By 1851 the total had risen to 89,505; in 1872 it stood at 107,855; in 1881 at 109,844; in 1891 at 109,229; and in 1901 at 119,306. It is now the third largest city in the Presidency. The population in 1901 included 85,577 Hindus, 22,821 Muhammadans, 5,754 Pārsīs, and 4,671 Jains. The Pārsīs and high-caste Hindus form the wealthy classes; the Musalmāns are in depressed circumstances, except the Bohrās, many of whom are prosperous traders, and whose head, called 'the Mullā of the Bohrās,' resides here. Fondness for pleasure and ostentation characterize all classes and creeds in Surat alike. Caste feasts and processions are more common and more costly than elsewhere. Fairs, held a few miles away in the country, attract large crowds of gaily dressed men and children in bright bullock-carts. The Pārsīs

join largely in these entertainments, besides holding their own old-fashioned feasts in their public hall. The Bohrās are famous for their hospitality and good living. The extravagant habits engendered by former commercial prosperity have survived the wealth on which they were founded.

Position and aspect. Surat lies on a bend of the Tāpti, where the river suddenly sweeps westward towards its mouth. In the centre of its river-front rises the castle, a mass of irregular fortifications, flanked at each corner by large round towers, and presenting a picturesque appearance when viewed from the water. Planned and built in 1540 by Khudāwand Khān, a Turkish soldier in the service of the Gujarāt kings, it remained a military fortress under both Mughal and British rule till 1862, when the troops were withdrawn and the buildings utilized as public offices. With the castle as its centre, the city stretches in the arc of a circle for about a mile and a quarter along the river bank. Southward, the public park with its tall trees hides the houses in its rear; while on the opposite bank, about a mile up the river on the right shore, lies the ancient town of RĀNDER, now almost a suburb of Surat. Two lines of fortification, the inner and the outer, once enclosed Surat; and though the interior wall has nearly disappeared, the moat which marks its former course still preserves distinct the city and the suburbs. Within the city proper the space is on the whole thickly peopled; and the narrow but clean and well-watered streets wind between rows of handsome houses, the residences of high-caste Hindus and wealthy Pārsīs. The suburbs, on the other hand, lie scattered among wide open spaces, once villa gardens, but now cultivated as fields. The unmetalled lanes, hollowed many feet deep, form watercourses in the rainy season, and stand thick in dust during the rest of the year. The dwellings consist of huts of low-caste Hindus or weavers' cottages. West of the city, the site of the old military cantonment is now occupied by the police, whose parade ground stretches along the river bank. Suburban villas, the property of wealthy residents of the city, are springing up along the Dumas and Varāchha roads.

History. The annals of Surat city, under native rule, have been briefly given in the article on SURAT DISTRICT. During the seventeenth and eighteenth centuries Surat ranked as the chief export and import centre of India. After the assumption of the entire government by the British in 1800, prosperity, which had deserted the city towards the close of the eighteenth century, for a time reappeared. But the steady transfer of trade to Bombay, combined with the famine of 1813 in Northern Gujarāt, con-

tinued to undermine its commercial importance; and by 1825 the trade had sunk to the export of a little raw cotton to the rising capital of the Presidency. In 1837 two calamities occurred in close succession, which destroyed the greater part of the city and reduced almost all its inhabitants to a state of poverty. For three days in the month of April a fire raged through the very heart of Surat, laying 9,373 houses in ruins, and extending over nearly 10 miles of thoroughfare, in both the city and the suburbs. No estimate can be given of the total loss to property, but the houses alone represented an approximate value of 45 lakhs. Towards the close of the rainy season in the same year, the Tāpti rose to the greatest height ever known, flooded almost the whole city, and covered the surrounding country for miles like a sea, entailing a further loss of about 27 lakhs. This second calamity left the people almost helpless. Already, after the fire, many of the most intelligent merchants, both Hindu and Pārsī, no longer bound to home by the ties of an establishment, had deserted Surat for Bombay. In 1838 it remained 'but the shadow of what it had been, two-thirds to three-fourths of the city having been annihilated.' From 1840 onward, however, affairs began to change for the better. Trade improved and increased steadily, till in 1858 its position as the centre of railway operations in Gujarāt brought a new influx of wealth and importance. The high prices which ruled during the American Civil War again made Surat a wealthy city. The financial disasters of 1865–6 in Bombay somewhat affected all Western India, but Surat nevertheless preserved the greater part of its wealth. In 1869 the municipality undertook a series of works to protect the city against floods. In 1883 Surat was again inundated, and damage caused to the extent of 20 lakhs. The loss of human life, however, was small. The city suffered from another extensive fire in 1889. At the present day, though the fall of prices has reduced the value of property, the well-kept streets, the public buildings, and large private expenditure, stamp the city, which has benefited by the construction of the Tāpti Valley Railway, with an unmistakable air of steady order and prosperity.

Buildings of interest.

The English church, built in 1820 and consecrated by Bishop Heber on April 17, 1825, stands upon the river bank, between the castle and the custom-house, and has seats for about 100 persons. The Portuguese or Roman Catholic chapel occupies a site near the old Dutch factory. The Armenians once had a large church, now in ruins. The Musalmāns have

several mosques, of which four are handsome buildings. The Nav Saiyid Sāhib's mosque stands on the bank of the Gopi lake, an old dry tank, once reckoned among the finest works in Gujarāt. Beside the mosque rise nine tombs in honour of nine warriors, whose graves were miraculously discovered by a local Muhammadan saint. The Saiyid Edroos mosque, with a minaret, which forms one of the most conspicuous buildings in Surat, was built in 1639 by a rich merchant, in honour of an ancestor of Shaikh Saiyid Husain Edroos, C.S.I., who died in 1882. The Mirza Sāmi mosque and tomb, ornamented with carving and tracery, was built about 1540 by Khudāwand Khān. The Pārsīs have two chief fire-temples for their two subdivisions. The principal Hindu shrines perished in the fire of 1837, but have since been rebuilt by pious inhabitants. Gosāvi Mahārājā's temple, built in 1695, was renewed after the fire at a cost of Rs. 1,50,000. Two shrines of Hanumān, the monkey-god, are much respected by the people. Specimens of excellent wood-carving are to be found on many of the older houses.

Tombs.

The tombs of early European residents, including those of the Dutch, and the more modern ones of the Mullās of the Bohrās, form some of the most interesting objects in Surat. Among the first named are those of many of the English 'Chiefs of Surat.' On the right of the entrance to the English cemetery is the handsome mausoleum of Sir George Oxenden and his brother Christopher. It is a large two-storeyed square building with columns at each angle; in the two eastern ones are staircases to the upper storey, over which is a skeleton dome of masonry in the form of a Maltese cross rendered convex. Christopher died on April 18, 1659; and Sir George, who in a long Latin epitaph is styled 'Anglorum in India, Persia, Arabia, Praeses, Insulae Bombayensis Gubernator,' died on July 14, 1669, aged 50. The earliest tomb is that of Francis Breton, President of Surat, who died on July 21, 1649. Among the many tombs with curious inscriptions is one to 'Mary, the wife of Will. Andrew Price, chief of the Affairs of Surat, &c.,' who, it is said, 'through the spotted veil of the small-pox, rendered a pure and unspotted soul to God,' April 13, 1761, *aetat.* 23. The tombs have been carefully looked after of late years. In the Dutch cemetery, which adjoins the English, there are also some curious and handsome tombs. One in particular to Baron Van Reede, Commissary-General of the United Netherlands East India Company for India, who died on December 15, 1691, once cost the Dutch Company Rs. 9,000 for repairs. Other buildings of historic interest

in Surat are the English and Portuguese factories, and the house occupied by the Sadr Adālat before its transfer to Bombay.

Trade and commerce.

The sea-borne trade of Surat has declined from a total estimated value of 156 lakhs in 1801 to 30 lakhs in 1903-4; namely, imports $17\frac{3}{4}$ lakhs and exports $12\frac{1}{4}$. The export trade is markedly decreasing. The principal articles of export are agricultural produce and cotton. The land-borne trade, however, since the opening of railway communication with Bombay and the interior, has increased considerably. The port of Surat used to be at SUVĀLI, 12 miles west of the city; but the sea-borne trade is now carried in small country craft which pass up the river to Surat. The station of the Bombay, Baroda, and Central India Railway is outside the city, surrounded by a rising suburb.

The organization of trade-guilds is highly developed in Surat. The chief of these guilds, composed of the leading bankers and merchants, is called the *Mahājan* or banker-guild. Its funds, derived from fees on cotton and on bills of exchange, are spent partly on animal hospitals and partly on the temples of the Vallabhāchārya sect. The title and office of Nagarseth, or chief merchant of the city, hereditary in a Srāwak or Jain family, has for long been little more than a name. Though including men of different castes and races, each class of craftsmen has its trade-guild or *panchāyat*, with a headman or referee in petty trade disputes. They have also a common purse, spending their funds partly in charity and partly in entertainments. A favourite device for raising money is for the men of the craft or trade to agree to shut all their shops but one on a certain day. The right to keep open this one shop is then put up to auction, and the amount bid is credited to the guild fund. There is a considerable hand industry in the spinning and weaving of cotton cloth, some of the very finest textures in Gujarāt being made here. Three steam mills have also been opened in the city, one of these having commenced work as early as 1866. The nominal capital of the mills in 1904 was nearly 20 lakhs, and there were 180 looms and 34,290 spindles at work, employing 1,288 persons daily.

Municipality.

The municipality was established in 1852. The receipts during the ten years ending 1901 averaged 5 lakhs. In 1903-4 the income was Rs. 4,85,900, chiefly derived from octroi ($1\frac{1}{4}$ lakhs), tax on houses and land (nearly $\frac{1}{2}$ lakh), and other taxes ($1\frac{1}{2}$ lakhs). The expenditure was $4\frac{1}{2}$ lakhs, including general administration and collection of taxes (Rs. 31,000), public safety (Rs. 23,000), water and public health and con-

servancy (2 lakhs), and public institutions (Rs. 25,000). The municipality has opened a number of excellent roads, well lighted, paved, and watered. It has constructed works for the protection of the city from floods, and for lessening the risk of fire. Systems of drainage, conservancy, and public markets have also been undertaken.

Two hospitals provide for the indigent poor; and there is one such institution for sick or worn-out animals. The clock-tower on the Delhi road, 80 feet in height, was erected in 1871 at the expense of Khān Bahādur Barjorjī Merwānjī Frazer. The Andrews Library is well patronized. In 1903-4 there were four high schools with 1,315 boys, and a mission high school with 56 girls. Of these, one is a Government high school with accommodation for 500 pupils, established in 1842. There were also four middle schools and an industrial school, with 412 and 88 pupils, respectively; 25 vernacular schools for boys with 4,693 pupils, and 16 for girls with 1,659 pupils. There are 5 printing presses and 5 weekly newspapers. Besides the Collector's and Judge's courts, the town contains a Small Cause court, two Subordinate Judges' courts, a civil hospital, a hospital for women and children, and a dispensary. The hospital is a handsome building of two storeys with a clock-tower. In the municipal gardens stands the Winchester Museum, which contains specimens of Surat silks and embroidery, and a few samples of forest produce.

Suvāli (the 'Swally' of the old records).—Seaport of Surat, in the Olpād *tāluka* of Surat District, Bombay, situated in 21° 10′ N. and 72° 39′ E., about 12 miles west of Surat city, outside the mouth of the Tāpti, with a good roadstead and deep water. Population (1901), 1,692. The channel, about 1½ miles in breadth and 7 miles in length, lies between the shore and a long strip of land dry at low water; 'Suvāli hole' is a cove which cuts into the land about the middle of this channel. With the arrival of large European ships, which had often to remain in the Tāpti for several months, Suvāli became the seaport of Surat. In 1626 it was already a place of importance. In the fair season (September to March) the Vānīs pitched their booths and tents and huts of straw in great numbers, resembling a country fair or market. Here they sold calicoes, China satin, porcelain, mother-of-pearl and ebony cabinets, agates, turquoises, carnelians, and also rice, sugar, plantains, and native liquor. For some years all ships visiting the Tāpti were allowed to anchor at Suvāli, but so great were the facilities for smuggling that, before many years had passed (1666), the

privilege was limited to English, French, and Dutch. About half a mile from the sea 'the factors of each of these nations built a convenient lodging of timber, with a flagstaff in front, flying the colours of its nation.' On the sea-shore was a European burial-ground, where, according to one account, was laid Tom Coryat, the eccentric traveller and author, who, says Terry, 'overtook death by drinking too freely of sack' in December, 1618, and was buried under a little monument like one of those usually made in our churchyards. The more authentic version affirms that Coryat was buried near Surat. Towards the end of the eighteenth century Suvāli was no longer a place of anchorage, its place being taken by the roads, a league south of the river mouth.

Thāna District.—District in the Northern Division of the Bombay Presidency, lying between 18° 53′ and 20° 22′ N. and 72° 39′ and 73° 48′ E., with an area of 3,573 square miles. It is bounded on the north by the Portuguese territory of Damān and by Surat District; on the east by the Western Ghāts; on the south by Kolāba District; and on the west by the Arabian Sea. Boundaries, configuration, and hill and river systems.

Thāna consists of a distinct strip of low land intersected by hilly tracts, rising to elevations varying from 100 to 2,500 feet. Towards the east and north-east the country is elevated, covered with trees, and but scantily cultivated. Near the coast the land is low, and, where free from inundation, fertile. North of the Vaitarna river, whose broad waters open a scene of exquisite loveliness, the shores are flat, with long, sandy spits running into muddy shallows, while the hills also recede; so that, a little north of the great marsh of Dāhānu, the general aspect resembles Gujarāt rather than the Konkan, while the language also begins to change from Marāthī to Gujarātī. Along the whole line of coast the soil is fertile, and the villages are exceedingly populous. In the north-east the hills are covered with forest, and the valleys but partially cultivated; the villages are seldom more than scattered hamlets of huts; and the population consists mainly of uncivilized aboriginal tribes, many of whom still wander from place to place as they find land or water to suit their fancy. Inland, the District is well watered and well wooded. Except in the north-east, where much of it rises in large plateaux, the country is a series of flat, low-lying rice tracts broken by well-marked ranges of hills. Salt marshes are an important feature of this part of the District; and in them the reclamation of land for cultivation is going on steadily though slowly. The Vaitarna, rising in the Trimbak

hills in Nāsik District opposite the source of the Godāvari, is the only considerable river. The sacredness of its source, so near the spring of the Godāvari, the importance of its valley, one of the earliest trade routes between the sea and the North Deccan, and the beauty of the lower reaches of the river, brought to the banks of the Vaitarna some of the first Aryan settlers. It is mentioned in the Mahābhārata as one of the four holy streams. The river is navigable for small craft from Agāshi to Manor, though deep and rapid in the rains. The Ulhās, rising in the ravines north of the Borghāt, flows into the Bassein creek, after a north-westerly course of about 80 miles. The other rivers are of little consequence—shallow during the cold season, and in the hot months almost dry. Except the Bassein creek, which separates the island of Salsette from the mainland and is navigable throughout its whole length, most of the inlets of the sea, though broad and deep at their mouths, become shallow watercourses within 10 miles of the coast.

There are no natural lakes; but the Vehār, Tulsī, and Tānsa reservoirs, formed artificially, supply Bombay City with water. The Vehār reservoir, about 15 miles from Bombay, between Kurla and Thāna, covers an area of about 1,400 acres. It is formed by three dams, two of which are built to keep the water from flowing over ridges on the margin of the basin that were lower than the top of the main dam. The quantity of the water supplied by the reservoir is about 8,000,000 gallons a day, or a little more than 10 gallons per head for the population of Bombay. Within the watershed of the reservoir, tillage or the practice of any handicraft is forbidden, and the wildness of the surrounding country keeps the water free from the risk of contamination. The water is excellent, and bacteriological examination shows that the growth of weeds has exercised no appreciable effect upon its quality. The cost of the Vehār reservoir, and of laying the pipes into Bombay, was over 37 lakhs. As apprehension was felt that the quantity of water drawn from the gathering ground of Vehār (2,550 acres) might prove too small for the wants of Bombay, the neighbouring Tulsī reservoir was excavated at a cost of 4½ lakhs and its water kept ready to be drained into Vehār. In 1377 a new scheme was undertaken for bringing an independent main from Tulsī to the top of Malabar Hill in Bombay, which was carried out at a cost of 33 lakhs. This source of supply gives an additional daily allowance of 6 gallons per head for the whole population of the city, and provides for the higher parts of

Bombay which are not reached by the Vehār main. The Pokarna reservoir, about 2 miles north-west of Thāna town, was constructed to supply drinking-water to Thāna in 1880–1. The Varala tank at Bhiwandi and the water-works at Murbād are important artificial reservoirs. The TĀNSA reservoir is elsewhere described.

From the Thalghāt to the extreme south the Western Ghāts form an unbroken natural boundary. Besides the main range and its western spurs, ranges of hills are found all over the District. Among the most considerable are those running through Salsette from north to south, the Damān range, in which is Tungār, and the range running from north to south between the Vaitarna and the Bassein creek. There are also several more or less isolated hills, many of them in former times forts of strength and celebrity. The two most striking in appearance are Māhuli and MALANGGARH.

There are a number of islands along the sea margin of Thāna District. The largest of these is Salsette, whose western belt is formed of what was formerly a string of small islets. Historians speak of the island of Bassein; and a narrow creek, the Supāri Khādi, still runs between the island and the mainland, crossed by the railway and the bridges at Bolinj and Gokhirve. In the Bassein *tāluka* is the island of Arnāla, containing a well-preserved fort—Sindhudrug or the 'ocean fort'—with Musalmān remains, Sanskrit and Marāthī inscriptions above the east gate, and an old Hindu temple inside. Islands.

Except in alluvial valleys, Thāna District consists entirely of the Deccan trap and its associates. The special geological features from Bassein northwards are the traces of extensive denudation and partial reproduction of land. Of the line of hot springs that occur along the west coast, Thāna has four representatives in Māhīm, Vāda, Bhiwandi, and Bassein. Except those in Māhīm, almost all are either in the bed of, or near, the Tansa river. Geology.

The vegetation of the District is essentially Konkan in character. The toddy palm is very common in the coast *tālukas*. Thāna has a great variety of forest trees, and among its fruit trees the grafted mangoes of the coast orchards reach a high pitch of excellence. They are of three known varieties: *Alphonso*, *Pairi*, and *Raival*; the first two are believed to have been brought from Goa. The garden trees of Bassein yield about ten varieties of plantains. The District is rich in fine flowering plants, such as *Capparis*, *Impatiens*, *Vitis discolor*, Botany.

Crotalaria, *Smithia*, *Erythrina*, *Blumea*, *Senecio*, *Sopubia*, and *Ipomaea*.

Fauna. In the beginning of the fourteenth century there were, according to Friar Oderic, a number of 'black lions' in the District. Tigers and leopards are found in decreasing numbers in the forests on the slopes and in the valleys of the Ghāts. Hyenas, jackals, and porcupines are common, and bison and *chītal* are seen occasionally. Crocodiles are found in the estuaries, such as the mouth of the Kalyān creek, and in the deeper fresh-water pools, and are numerous in the Vehār lake. The District is infested with snakes, both venomous and harmless.

Climate and temperature. For fully half the year the climate is exceedingly moist, and the District is generally unhealthy. There are no great variations in temperature during the different seasons of the year, the air being cooled by sea winds during the hot months and in the south-west monsoon. The mean annual temperature is 83°, ranging from 58° in January to 103° in April. Except on the coast, October and November are malarious months, owing to the drying of the monsoon moisture. The cold season is short and mild. Two shocks of earthquake have been noted in the District, one in 1849 and the other in 1877. The latter was preceded by a noise 'like cannon being trotted along the road.'

Rainfall. The rainfall is heavy and is entirely derived from the south-west monsoon. Along the coast north of Bassein it averages from 62 to 69 inches, and at Bassein 83 inches. Frequently continuous rain causes damage to the embankments of the fields and the seed-beds of rice, washing away transplanted crops, and otherwise doing much mischief. The Shāhāpur *tāluka* has the heaviest fall (111 inches), and the minimum is in Umbargaon *petha* (62 inches). The rainfall over the whole District averages 92 inches.

History. In the third century B.C. Asoka's edicts were engraved at Sopāra in this District. After Asoka, the Andhrabhrityas ruled the Konkan, including Thāna. To them succeeded the Sāh dynasty, or Western Kshatrapas, and a revival of the former Mauryan dominion was subsequently overthrown by the Chālukyas of Kalyān. From 810 to 1260 the District was part of the possessions of the Silahāras, who made their capital at Purī (Elephanta), the former seat of the Mauryas in the Konkan. The Silahāras were probably of Dravidian origin. In their time (*c.* 1300) the Musalmāns overran the coast; but their supremacy was hardly more than nominal until about 1500, when

the Ahmadnagar kings established themselves firmly. They soon came into collision with the Portuguese, who at this time appeared upon the scene, and after a struggle established themselves at Bassein in 1533 and built a fort. Their acquisitions spread along the coast and brought them into hostility with the Ahmadnagar king who held Kalyān and the interior, and the Kolī chiefs of Jawhār. The possessions of the Ahmadnagar kings passed to the Mughals. In 1666 Sivajī seized the south-east of Thāna and attacked the Portuguese in Salsette, and by 1675 he was the undisputed ruler of the interior as far as Kalyān; but a little later the Mughals regained a footing, and in 1694 they attacked the Portuguese. The Sīdīs of Janjīra commanded the Musalmān fleet; and the naval wars between them and the Marāthās often imperilled the safety of the island of Bombay. Arab pirates devastated the Portuguese possessions, and after Aurangzeb's death Angria subdued the country from the Borghāt to Bhiwandi. About 1731 the power of both Angria and the Sīdī appears to have declined through internal dissensions, on which the Peshwā's central government came to the front. By 1739 he had deprived the Portuguese of all their possessions, including the ports of Thāna and Bassein. The expense of maintaining Bombay induced the English to make an effort to obtain Salsette by treaty, and, this failing, they took it by force in 1774. In 1775 Raghunāth Rao Peshwā ceded Bassein and its dependencies to the British. Jealousy of the French, who had entered into negotiations with the Peshwā, induced the Bombay Government to attack the Marāthās; but being obliged to oppose Haidar Alī in Madras, they restored their conquest, Bassein and its dependencies, on the mainland of Thāna, by the Treaty of Sālbai, in 1782. In 1817 the Peshwā ceded the northern parts of the present District in return for British support, and, war breaking out almost immediately, the rest was annexed. Since then, operations to put down the Kolī robbers, which extended over several years, and police measures to punish occasional gang robberies by the same tribe have been the only interruptions to the peace of the District.

Archaeology.

The archaeological remains in Thāna District are mainly Hindu. The most interesting Portuguese remains are the forts and churches at BASSEIN and at Mandapeshvar, GHODBANDAR, and other places in Salsette. The chief Musalmān remains are mosques, tombs, and reservoirs at BHIWANDI and KALYĀN. The principal Buddhist remains are caves at KĀNHERI, Kondivati, and MĀGĀTHAN in Salsette, and at Lonād in Bhiwandi, the Kānheri caves being of special interest. Brāhmanic remains include

caves at Jogeshvari and Mandapeshvar in Salsette; temples at Ambarnāth in Kalyān, Lonād in Bhiwandi, and Atgaon in Shāhāpur; and caves at Palu Sonāla in Murbād. Other remains, either Buddhist or Brāhmanic, are a rock-cut temple at Vashali in Shāhāpur; caves or cells at Indragath in Dāhānu, and at Jivdhan in Bassein.

The people. In 1846 the population of the District is said to have been 593,192; in 1872 it was 847,424; in 1881, 908,548; in 1891, 904,860; and in 1901, 811,433. The recent enumerations show an apparent decrease, which is due to the transfer to Kolāba District of the Panvel *tāluka* between 1881 and 1891 and of the Karjat *tāluka* before 1901. The adjusted population for the present area was in 1872, 673,560; in 1881, 725,305; in 1891, 819,580; and in 1901, 811,433, the actual decrease during the last decade being one per cent. The District is divided into nine *tālukas*, with area and population as follows:—

Tāluka.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Dāhānu *	644	...	212	129,815	202	− 3	5,526
Māhīm	409	1	187	82,562	202	− 4	3,712
Vāda †	566	...	221	70,895	125	− 1	1,609
Shāhāpur	610	...	197	83,881	138	− 9	2,206
Bassein	223	1	90	80,251	360	+ 5	4,258
Bhiwandi	249	1	196	77,440	311	− 11	2,852
Kalyān	276	1	224	77,087	279	− 4	3,103
Murbād	350	...	171	62,569	179	− 5	1,833
Salsette	246	3	128	146,933	597	+ 16	18,009
District total	3,573	7	1,626	811,433	227	+ 1	43,108

* Including Umbargaon *petha*.
† Including Mokhāda *petha*, which, since 1901, has been transferred to it from the Shāhāpur *tāluka*.

There are seven towns—BĀNDRA, BASSEIN, BHIWANDI, KALYĀN, KELVE-MĀHĪM, KURLA, and THĀNA, the head-quarters—and 1,696 villages. The density is 227 persons per square mile, Salsette containing the maximum, 597. Marāthī is spoken by 88 per cent. of the population. According to religion, Hindus form 90 per cent. of the total, Musalmāns and Christians 5 per cent. each.

Castes and occupations. The population of Thāna consists very largely of primitive tribes, such as the Vārlis (89,000), Thākurs (51,000), Kāthkaris (22,000), and Kāthodis (13,000), and the more progressive aborigines the Agrīs (84,000) and Kolīs (86,000). The first four for the most part lead a wandering life in the jungle, sub-

sisting by the collection and sale of forest produce or raising a scanty crop by rude methods of cultivation. The Agrīs are salt-makers and cultivators, while the Kolīs living on the coast are sailors and fishermen. These castes and tribes are animistic, and worship non-Brāhmanic spirits and deities. Even Pārsīs, Jews, Musalmāns, and Christians make offerings to these local deities. Except a few who proceed to Bombay during the dry season, chiefly as labourers and cartmen, the people seldom leave their homes in search of work. Their labour seems not to be in much demand outside the District, probably because their fever-stricken constitutions prevent them from competing with the able-bodied labouring classes of Poona, Sātāra, and Ratnāgiri. Much of this want of strength is due to the weakening climate, malarious forests, the strain and exposure in planting rice, and the immoderate use of spirituous liquors. Of outside labourers who come to Thāna for work, the most important class are Deccan Kunbīs (108,000) and Mahārs (44,000), of whom the former are known in the District as *ghātis* or 'highlanders.' They generally arrive in the beginning of the fair season, trooping in hundreds down the Borghāt and other passes. Many find employment as grass-cutters in Salsette, Kalyān, and Māhīm. The chief palm-tapping caste is the Bhandāri (14,000), common throughout the Konkan. In the higher ranks, the chief Brāhman caste is the Konkanasth (6,000), and Prabhus or writers are numerous (5,000). Traders come from Gujarāt and Mārwār, and are chiefly Vānīs (10,000), including Bhātias (780), and Pārsīs (5,000). Agriculture supports 65 per cent. of the total population; of the rest, 4 per cent. are supported by industry and 2 per cent. by general labour. Fishermen and fish-curers number 14,000. The cultivators are mainly Kunbīs and Agrīs.

Christian missions.

In 1901 the Christian population comprised 601 Europeans and Eurasians and 42,000 native Christians, of whom 29,000 were Roman Catholics. The unusually large number of native Christians is a relic of Portuguese dominion. As the original converts were not obliged to give up caste distinctions, their descendants have retained many of them, and a Thāna Christian can still tell to what caste his family belonged before conversion. The Christians of several villages in the Bassein *tāluka* claim descent from Brāhmans. Indeed, Christians of some castes commonly call themselves Christian Bhandāris, Kunbīs, or Kolīs, as the case may be; and members of different castes do not, as a rule, intermarry, though the restriction in this respect is not so rigid as among Hindus. All of them have Portuguese

names; and they show their attachment to their faith by contributing very largely to their churches and to the support of their priests. All Christian villages on the coast, and a good number inland, have their churches; and where a congregation is not large enough to keep a resident priest, one priest serves two or three churches. At many of the Salsette churches annual fairs or festivals are held, to which the Christians flock in great numbers. Numerous Hindus and Pārsīs also attend, as some of the shrines have a reputation for working cures, which is not confined to Christians, and obtains for them many heathen offerings. The upper classes dress as Europeans, the lower generally with jacket and short drawers of coloured cotton, and a red cloth cap; the women of the lower classes dress like the Marāthās, and, when they appear at church, wear a voluminous white shawl or mantle. Their houses are generally tiled, and often two-storeyed, and frequently washed in colours outside. Many of these Christians are employed as clerks and shopmen in Bombay; but they pride themselves on differing from their brethren of Goa in refusing to enter domestic service. They live by cultivation, fishing, toddy-drawing, and every other employment open to similar classes of Hindus. A few members of the best families enter the priesthood. In Salsette very many, and in Bassein a few, of the state grants to village headmen are held by Christians. In religious matters the Thāna Christians belong to two bodies, those under the jurisdiction of the Archbishop of Goa and those under the jurisdiction of the Vicar Apostolic of Bombay. The latter are a small body, not numbering more than 5,000 souls. Their spiritual matters are managed chiefly by members of the Society of Jesus. Besides Bāndra, where they have a church of St. Peter and two native orphanages, they have churches and vicars at the villages of Mān, Kānchavli, Gorai, Juhu, Wadoli, and Nirmal. There are nine churches and one chapel with a resident priest in Bassein under the jurisdiction of the Bishop of Dāman. At Malyān is a branch of the German Baptist Brethren Mission of Surat, and at Sanjān is a small boarding-school belonging to another mission, which has done good work with children of both sexes. The American Methodist Episcopalian Mission maintains a small branch at Kasara in the Shāhāpur *tāluka*, as also does the Pentecostal Mission at Vasind.

General agricultural conditions.

The main division of soil is into 'sweet' and 'salt.' 'Sweet' land is either black or red; the black is known as *shet*, meaning the level rice lands, and the red as *mālvarkas*, that is, the

flat tops and slopes of trap hills. Rice lands belong to two classes, *bāndhni* and *mālkhandi*. *Bāndhni* lands are either banked fields which can be flooded, or low-lying fields without embankments, in which water lies during the rains. The low-lying fields are the most productive, as the rain-water leaves a rich deposit. *Mālkhandi* lands are open fields in which no water gathers and which have no embankments. In many places along the coast, especially in the garden lands of Bassein and Māhīm, the black soil is lighter and more sandy than in the interior.

The District is almost entirely *ryotwāri*, only about 6 per cent. being *inām* or *jāgīr*. About one per cent. is owned by *izāfatdārs* and ½ per cent. by *khots*. The chief statistics of cultivation are as follows, in square miles :— Chief agricultural statistics and principal crops.

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Dāhānu . .	641	294	½	38	194
Māhīm . .	409	137	2	36	121
Vāda . .	567	229	...	21	202
Shāhāpur .	610	220	...	26	210
Bassein . .	219	88	4	13	79
Bhiwandi .	249	123	...	5	76
Kalyān . .	276	148	...	6	53
Murbād . .	350	161	...	6	83
Salsette . .	249	128	2	25	24
Total	3,570*	1,528	8½	176	1,042

* The area for which statistics are not available is 102 square miles. The total area is based upon the latest information and differs by three miles from that given in the *Census Report* of 1901.

Among the crops, rice holds the first place with an area of 493 square miles; next come *rāgi* and *vari* with 81 and 25 respectively, mostly sown in the Shāhāpur and Murbād *tālukas* and in the Mokhāda *petha* of the Vāda *tāluka*. The cultivation of rice is carried on extensively in embanked fields. Inferior cereals, oilseeds, pulses, and *san*-hemp are grown on the uplands and in the north of the District; gram or *vāl* occasionally follows sweet rice as a catch-crop. There is a valuable trade in forage with Bombay. The gardens and orchards of the coast also contribute largely in vegetables and fruits to the same market, to which they supply excellent mangoes and plantains.

Two influences, sea encroachment and land reclamations, have for centuries been changing the lands along the coast. Of the encroachments, the most remarkable are at Dāhānu, where the sea has advanced about 1,500 feet; and at the mouth of the Vaitarna, where since 1724 four villages have Improvements in agricultural practice.

been submerged. Of the land reclamations, most have been made in small plots, which, after yielding crops of 'salt' rice for some years, gradually become freed from their saltness, and merge into the area of 'sweet' rice land. Most of the embankments built to keep back the sea are believed to be the work of the Portuguese, having been constructed partly by the Government and partly by the European settlers to whom the Government granted large estates. In this, as in other respects, the Portuguese did much to improve the coast districts. The supply of *rab* manure is now much improved, owing to the action of the local authorities in pressing a more economical system of tree and shrub-lopping upon the cultivators. Efforts have recently been made in the Mahīm *tāluka* to introduce oil engines and long channels for garden cultivation. From the beginning of British rule, salt wastes have been granted for reclamation on specially favourable terms. During the decade ending 1903-4 the cultivators found it necessary to borrow only 2·5 lakhs under the Land Improvement and Agriculturists' Loans Acts. Of this sum, Rs. 89,000 was advanced in 1899-1900.

Cattle, ponies.

Except in Mokhāda, the east of Vāda, and Shāhāpur, little attention is paid to the breeding of cattle. In Mokhāda care is taken in the selection of bulls, which are bought from Nāsik graziers, the Kānadās cattle from the hills or the Nāsik border being considered the best. The ponies bred locally are chiefly undersized. There are no special varieties of sheep or goats.

Irrigation.

Along the coast the water-supply is abundant, and the water, though brackish, is not unwholesome. Inland, water can be had for the digging, but the people are so poor that wells are few and the supply of water scanty. The chief irrigation consists of flooding the rice lands during the rains by means of the small streams that drain the neighbouring uplands. In the dry season some irrigation is carried on from rivers and unbricked wells. About 8½ square miles were irrigated in 1903-4, chiefly from wells; and there were 5,057 wells and 22 tanks used for irrigation.

Fisheries.

The sea fisheries of Thāna are important and very productive. The supply of fresh fish for the market of Bombay and of dried fish for the Deccan supports a large section of the population, chiefly Kolīs. The oysters of Kālu in the north of the District bear an excellent reputation. Of the pearls, which are mentioned by Pliny (A.D. 77) and by Al Idrīsi (A.D. 1135), specimens are still found in the Thāna creek.

Forests.

Forest administration is under the control of three divisional

Forest officers, assisted by three subdivisional Forest officers. The forests of Thāna, which supply Bombay with a large quantity of firewood, yielded a revenue of Rs. 64,700 in 1870–1, and about 3·7 lakhs in 1901. In 1903–4 the income was 3·8 lakhs. Together with those of Kanara and Khāndesh, they are the largest and most valuable in the Presidency. About 1,028 square miles have been provisionally gazetted as 'reserved' and 213 square miles as 'protected' forest. The timber trade is chiefly in the hands of Christians of Bassein, Musalmāns, and Pārsīs. The District has a great variety of forest trees. The forest products are timber, firewood, charcoal, bamboos, *kārvi*, *ain* and other barks, *apta* and *temburni* leaves. Much of the forest is chiefly valuable as supplying grazing, the income derived from fodder and grazing in 1903–4 being Rs. 11,000.

Minerals.

Thāna is destitute of workable minerals. The laterite which caps many of the highest hills, such as Prabal and Māhuli, bears traces of iron, and where charcoal has been burnt lumps of clay resembling iron slag may be found. The water in many springs also shows signs of iron. But iron ore is nowhere found in paying quantities. The only other mineral of which there are traces is sulphur, found in the hot springs at Vajrābai in Bhiwandi.

Arts and manufactures.

Next to agriculture, the making of salt is the most important industry of the District. There are 99 salt-works with an out-turn in 1903–4 of 2,300,000 maunds, yielding a revenue of 53 lakhs. The salt-workers are chiefly Agrīs. Thāna salt is made by the solar evaporation of sea-water. Ordinary brass-work and pottery are important industries. Hand-loom weaving by Portuguese or native Christians, who made cotton-cloth, including the particular striped variety known as Thāna cloth, is now practically extinct. The Musalmāns of Thāna and Bhiwandi weave silk and cotton goods, but the industry suffers from proximity to the Bombay mills. There are at Kurla two spinning and weaving mills, owned by public companies, with 81,000 spindles and 1,715 looms, which produce 11,000,000 lb. of yarn and nearly 5,000,000 lb. of cloth for the Indian and foreign markets. During 1904 the average number of daily workers was 4,502. There is also a bone-mill which employs 100 hands and manufactures bone manure. Of other industries the cleaning of agave fibre and the manufacture of paint may be mentioned, while a large number of people are employed in lime-burning and brick-making.

Commerce.

From the earliest historical times there has always been an ocean trade to the coast of Thāna and caravan traffic

through the Ghāt passes. Since the establishment of railway communication with the interior, the roads and tracks of the District have carried only local traffic, which is still considerable. The chief articles of export are rice, salt, wood, lime, and dried fish. Cotton cloth, grain, tobacco, coco-nuts, sugar, and molasses are the chief articles of import. The annual value of the sea-borne trade of the ports in 1903-4 was: imports 55 lakhs, and exports 57 lakhs. The leading traders are Konkani Musalmāns, Gujarāti and local Vānīs, and Bhātias. Numerous fairs are held in the District.

Communications. Railways and roads.

Along the sea-coast, and up the creeks, sailing vessels and canoes form a ready means of communication. In three directions the District is crossed by railways. To the north, the line of the Bombay, Baroda, and Central India Railway skirts the coast for a total distance of 95 miles. East and west, the Great Indian Peninsula Railway runs for 24 miles, and then dividing, goes north-east by the Thalghāt to Nāsik and south-east by the Borghāt to Poona. Two main lines of road run eastward, the Agra road across the Thalghāt to Nāsik and the Poona road by way of the Borghāt. Since the establishment of Local funds, many new lines of roads have been made; and in 1903-4 there were 708 miles of roads in the District, of which 327 miles were metalled. Of the latter, 133 miles of Provincial and 139 miles of Local roads are maintained by the Public Works department. Avenues of trees have been planted along 357 miles.

Causeways.

During the nineteenth century three causeways were made between the islands in the neighbourhood of Bombay City. The first joined Sion in Bombay with Kurla in Salsette, the second joined Māhīm in Bombay with Bāndra in Salsette, and the third joined Kurla in Salsette with Chembur in Trombay. The Sion causeway was begun in 1798 and finished in 1805 at a cost of Rs. 50,000. In 1826 its breadth was doubled, and it was otherwise improved at a further outlay of Rs. 40,000. The Sion causeway is 935 yards long and 24 feet wide. In 1841 Lady Jamsetjī Jījībhoy offered Rs. 45,000 towards making a causeway between Māhīm and Bāndra. The work was begun in 1843, and before it was finished Lady Jamsetjī increased her first gift to Rs. 1,55,800. The causeway was completed at a total cost of Rs. 2,04,000, and was opened in 1845. It is 3,600 feet long and 30 feet wide, and in the centre has a bridge of 4 arches, each 29 feet wide. The Chembur causeway was built about 1846, and is 3,105 feet long and from 22 to 24 feet wide.

Thāna, like the rest of the Konkan, is practically free from the effects of drought. The earliest famine of which information is available took place in 1618. In that year at Bassein the famine was so severe that children were openly sold by their parents to Musalmān brokers, until the practice was stopped by the Jesuits. The great famine of 1790 interrupted the progress of Salsette. The exodus caused by Marāthā raids in the Deccan led to scarcity in the Konkan in 1802. Of seasons marked by more or less general dearth, the chief are: 1839, when remissions of about 3 lakhs had to be granted; 1848, when most of the 'salt' rice crop failed owing to high spring-tides. In 1899 the rainfall was unfavourable and caused distress in some parts of the District, but the area affected was only one-tenth of the total. Famine.

The District is divided into three subdivisions, in charge of two Assistant Collectors and one Deputy-Collector. It comprises the *tālukas* of BASSEIN, BHIWANDI, DĀHĀNU, KALYĀN, MĀHĪM, MURBĀD, SALSETTE, SHĀHĀPUR, and VĀDA, the petty subdivisions (*pethas*) of Umbargaon and Mokhāda being included in the Dāhānu and Vādā *tālukas*. The Collector is *ex-officio* Political Agent of the Jawhār State. District subdivisions and staff.

The administration of justice is under the District and Sessions Judge, whose jurisdiction, except during the monsoon months, includes Kolāba District. He is assisted by one Assistant and six Subordinate Judges. There are altogether 31 officers to administer criminal justice. The commonest offences are theft and housebreaking. Offences under the Railway Act, which are tolerably frequent, are tried by the Assistant Collector in charge of Bassein, Dāhānu, and Salsette, as railway magistrate. Civil and criminal justice.

Besides the regular survey tenure common to the Presidency, a considerable number of villages, chiefly in the Salsette *tāluka*, are held on the *khoti* tenure. The *khots*, who are leaseholders of a certain number of villages, obtained their land from the British Government at an early period of its rule. Another kind of leasehold tenure, known as *izāfat*, which is found in most parts of the District, is a variety of the service tenure of hereditary officials. The lands are now held on the survey tenure, the *izāfatdār* having a position analogous to that of superior holders. Other lands, lying either on the coast or along the larger creeks, are held on the *shilotri* tenure. *Shilotri* lands are those which have been reclaimed from the sea and embanked, and of which the permanence is dependent on the embankments being kept up. These reclamations are Land revenue administration.

known as *khārs*. The tenure is of three sorts. First, *shilotri* proper, under which the *khār* belongs to the person by whom it was reclaimed. The *shilotridārs* are considered to have a proprietary right; they let out their lands at will, and, according to old custom, levy a maund of rice per *bīgha*, in addition to the assessment for the repair of the outer embankments. The second class of *shilotri* lands are those in which Government either reclaimed the *khārs* in the first instance, or subsequently became possessed of them by lapse. Except that they pay an extra rate, which is spent in repairing the embankments, the cultivators of these *khārs* hold their lands on the same condition as survey occupants. The third class of *shilotri* lands comprises those in which reclamations were made by associations of cultivators on special terms arranged with Government. Many forms of assessment were in force when Thāna was ceded to the British, and continue in use in groups of villages. They can usually be traced to the Hindu chiefs who held the country before the arrival of the Musalmāns. Rice lands were, without measurement, divided into parcels or blocks which were estimated to require a certain amount of seed, or to yield a certain quantity of grain. The system has several names, *dhep*, *hundābandi*, *mudābandi*, *kāsbandi*, *takbandi*, and *tokābandi*, though the leading principle of all is the same. The levy of a plough cess, a sickle cess, or a pickaxe cess, which, till the introduction of the revenue survey, was the form of assessment almost universal in hill and forest tracts, seems also to date from early Hindu times; and the practice of measuring palm and other garden lands into *bīghas* seems to belong to the pre-Musalmān rulers. Finally, the Kanarese term *shilotar* shows that from early times special rules have been in force to encourage the reclamation of salt wastes. During the sixteenth century the officers of the Ahmadnagar kingdom are said to have measured the rice land and reduced the state share to one-sixth, and in the uplands to have continued the levy of a plough cess. The husbandmen were treated as proprietary holders. Early in the seventeenth century Malik Ambar, the Ahmadnagar minister, introduced a new system based on that of Todar Mal. According to Major Jervis, Malik Ambar's chief innovation was to make the settlement direct with the village instead of with the hereditary revenue superintendents and accountants. His next step was to find out the yield of the land. With this object he arranged the rice lands into four classes. Later in the seventeenth century Sivajī, by his minister Annājī Dattu (1668-81), divided

the lands into twelve classes. The Portuguese, in Bassein and Salsette, leased the land to *fazendeiros*, or hereditary farmers of land, at a *foro* or quit-rent; but the payment by tenants to proprietors was regulated on the ancient system. The eighty-seven years (1730–1817) of Marāthā management form three periods: thirty years during which no change was introduced; thirty years when fresh surveys were made, new cesses were levied, and revenue farming became general; and twenty-seven years when revenue farming was universal. In 1774, when Salsette and Karanja were acquired by the British, the people were in great misery and revenue was largely in arrears. In 1798–9 a new system was introduced. All the petty taxes levied by the Portuguese and Marāthās were abolished, and the Government demand was fixed at one-third of the average produce of all lands except *shilotri* lands, which were charged with one-fifth. From the cession of the Peshwā's territory in 1817 to the completion of the original survey settlement in 1886 the revenue history likewise belongs to three periods: eighteen years (1817–35) in which the establishment of a system of village accounts was substituted for one of revenue farmers, and rates were revised; seventeen years (1835–52) of further reductions; and since then, the revenue survey.

In 1895 a resettlement was undertaken which was completed in 1904. The survey found that the cultivated area had increased by 10,000 acres, and the settlement enhanced the total revenue by nearly 4 lakhs of rupees to 14 lakhs. The average rates are: 'dry' land, 5 annas (maximum Rs. 2–2, minimum 2 annas); rice land, Rs. 3–11 (maximum Rs. 8–10, minimum Rs. 1–6); and garden lands, Rs. 1–10 (maximum Rs. 5–8, minimum 11 annas).

The collections on account of land revenue and total revenue have been as follows, in thousands of rupees:—

	1880–1.*	1890–1.	1900–1.	1903–4.
Land revenue . .	15,12	13,36	12,94	15,68
Total revenue . .	27,80	28,87	29,89	33,36

* In 1880–1 the District included two *tālukas* since transferred to Kolāba.

Munici-palities and local boards.

The District contains seven municipal towns: namely, THĀNA, KŬRLA, BĀNDRA, BASSEIN, KELVE-MĀHĪM, BHIWANDI, and KALYĀN. Outside these, local affairs are under the District board and nine *tāluka* boards. The expenditure of these boards in 1903–4 was 2½ lakhs, of which nearly half was spent on roads and buildings. The income amounted to 3 lakhs, the land cess being the chief item.

Police and jails.

The District Superintendent, with the aid of one Assistant Superintendent, 2 inspectors, and 12 chief constables, controls the police of the District. There are 14 police stations. The force in 1904 numbered 610 men, working under 152 head constables. Besides the District jail, called a 'special' jail as it accommodates long-term convicts to the number of 730, there are 11 subsidiary jails and one lock-up in the District, with accommodation for 102 prisoners. The daily average prison population in 1904 was 681, of whom 38 were females.

Education.

Thāna stands ninth among the Districts of the Presidency in the literacy of its population, of whom 5·2 per cent. (9·1 males and 1·3 females) could read and write in 1901. In 1855–6 there were only 17 schools in the District, attended by 1,321 pupils. By 1881 the number of schools had risen to 178, attended by 8,872 pupils, who in 1891 had increased to 17,984. In 1901 the number was 13,191, but the decrease was due to changes in the District area. In 1903–4 the District had 301 schools, of which 48 were private, attended by 15,843 pupils, of whom 2,653 were girls. The public institutions included 3 high, 9 middle, and 241 primary schools. Of the 253 public institutions, one is managed by the Educational department, 186 by the local boards, 42 by municipalities, while 23 are aided and one is unaided. The total expenditure on education in 1903–4 was nearly 1¾ lakhs, of which 54 per cent. was devoted to primary education.

Hospitals and dispensaries.

In 1904 the District possessed one hospital, 14 dispensaries, and a leper home. The Thāna civil hospital was established in 1836, and the first dispensary was opened at Bāndra in 1851. These institutions contain accommodation for 126 in-patients, 35 being in the leper home. Including 652 in-patients, the total number treated was 115,000, and the operations performed numbered 2,137. The expenditure on medical relief was Rs. 51,000, of which Rs. 16,000 was contributed by Local and municipal funds. A lunatic asylum at Navāpāda had 310 inmates in 1904, and is overcrowded.

Vaccination.

The number of persons successfully vaccinated in 1903–4 was 19,120, representing the proportion of 23·6 per 1,000, which is slightly below the average for the Presidency. Since 1900 vaccination has been compulsory in Bāndra and Kurla towns.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. xiii (Parts i and ii) and vol. xiv (1882).]

Dāhānu Tāluka.—Northernmost *tāluka* of Thāna District, Bombay, lying between 19° 49′ and 20° 22′ N. and 72° 39′ and 73° 9′ E., with an area of 644 square miles, including the

petty subdivision (*petha*) of Umbargaon. The population in 1901 was 129,815, compared with 134,395 in 1891. The density, 202 persons per square mile, is slightly below the District average. There are 212 villages but no town, DĀHĀNU being the head-quarters. Land revenue and cesses in 1903–4 amounted to 1·9 lakhs. The *tāluka* has a picturesque aspect, most of the interior being occupied by forest-clad hills in small detached ranges of varying height. Towards the coast are broad flats, hardly above sea-level, and seamed by tidal creeks. The climate of the interior is unhealthy, and though that of the coast is generally pleasant and equable, after the rains it becomes malarious.

Māhīm Tāluka.—Western *tāluka* of Thāna District, Bombay, lying between 19° 29′ and 19° 52′ N. and 72° 39′ and 73° 1′ E., with an area of 409 square miles. It contains one town, KELVE-MĀHĪM (population, 5,699), the head-quarters; and 187 villages. The population in 1901 was 82,562, compared with 85,841 in 1891. The density, 202 persons per square mile, is slightly below the District average. Land revenue and cesses in 1903–4 amounted to more than 1·9 lakhs. A range of forest-clad hills divides the *tāluka* from north to south; and in the north-east corner are high hills with jagged peaks, of which Asheri is the chief. In the south-east, Takmak peak rises to 2,000 feet above sea-level. The land to the west of the central range is low, flat, and broken by swamps and tidal creeks. The climate is pleasant on the coast during the hot season; but during the rest of the year both the coast and the interior are notoriously malarious. The rainfall (63 inches) is much below the District average. The water-supply is fair. The Vaitarna river, which flows through the *tāluka*, is navigable by native craft of about 25 tons. Hot springs, similar to those at Vajrābai in Bhiwandi, are found at Sativli and are supposed to flow from the same source.

Vāda.—Eastern *tāluka* of Thāna District, Bombay, lying between 19° 28′ and 20° 8′ N. and 72° 56′ and 73° 30′ E., with an area of 566 square miles. It contains 221 villages, Vāda being the head-quarters. The population in 1901 was 70,895, compared with 71,385 in 1891. The density, 125 persons per square mile, is much below the District average. Land revenue and cesses in 1903–4 amounted to nearly Rs. 93,000. Until 1866 Vāda was a petty subdivision (*petha*) of the old Kolvan, the present Shāhāpur *tāluka*. Along the valley of the Vaitarna river, which divides the *tāluka* from north to

south, the land is well cultivated, and the villages are fairly numerous. The rest of the country, especially in the north-west and the east, is very hilly, and the population extremely scanty. There are three made roads, namely the Vāda-Bhiwandi, the Vāda-Shirghat, and the Vāda-Māhim roads; but during the rains the country tracks are impassable. In the interior the supply of water from the Vaitarna, the Deherja, and the Pinjal is constant and fair. In other parts, where it is obtained from wells, the supply is doubtful and the quality bad. The whole *tāluka* is wooded, the forests in some parts stretching for miles. The chief trees are teak, *ain*, *mahuā*, and *khair*. Since 1901 Vāda has included the petty subdivision (*petha*) of Mokhāda, which formerly was a part of Shāhāpur. Mokhāda, which contains 69 villages and has an area of 259 square miles, consists of a thin strip of undulating plateau, lying for the most part between the Jawhār State on the west and the Western Ghāts in the north and east. The mountain of Utwad (4,081 feet) is a conspicuous feature of the hilly portion, over the summit of which passes the boundary line between Thāna and Nāsik Districts.

Shāhāpur Tāluka.—Eastern *tāluka* of Thāna District, Bombay, lying between 19° 18′ and 19° 44′ N. and 73° 10′ and 73° 43′ E., with an area of 610 square miles. It contains 197 villages, Shāhāpur being the head-quarters. The population in 1901 was 83,881, compared with 92,029 in 1891. It is the most thinly populated *tāluka* in the District, and the density, 138 persons per square mile, is much below the District average. Land revenue and cesses in 1903–4 amounted to 1·4 lakhs. The country, which was formerly known as Kolvān, is for the most part wild, broken by hills, and covered with large forests. In the south there are wide tracts of rice lands. The soil is mostly red and stony, and the climate unhealthy, except in the rains. There are five factories for husking rice in Shāhāpur.

Bassein Tāluka.—Western *tāluka* of Thāna District, Bombay, lying between 19° 16′ and 19° 35′ N. and 72° 44′ and 73° 1′ E., with an area of 223 square miles. It contains one town, BASSEIN (population, 10,702), the head-quarters; and 90 villages, including AGĀSHI (8,506). The population in 1901 was 80,251, compared with 76,110 in 1891. The density, 360 persons per square mile, largely exceeds the District average. Land revenue and cesses in 1903–4 amounted to 1·8 lakhs. The *tāluka* is formed of a portion of the mainland and of territory which was once the island of Bassein, but is now no longer an island, the narrow creek which divided

it from the mainland having silted up. With the exception of two small hills, about 200 feet high, the surface of the island portion is flat, with a rich soil, yielding crops of rice, plantain, sugar-cane, and *pān*. On the mainland portion are the Tungār and Kāman hills, both over 2,000 feet in height, the last named, known as Bassein Peak or Kāmandrug, being 2,160 feet above sea-level. On the coast the climate is generally pleasant and equable; inland the heat is great, and in the rains much fever prevails.

Bhiwandi Tāluka.—Central *tāluka* of Thāna District, Bombay, lying between 19° 12′ and 19° 32′ N. and 72° 58′ and 73° 15′ E., with an area of 249 square miles. It contains one town, BHIWANDI (population, 10,354), the head-quarters; and 196 villages. The population in 1901 was 77,440, compared with 87,490 in 1891. The density, 311 persons per square mile, exceeds the District average. The land revenue and cesses in 1903–4 amounted to 2·1 lakhs. The centre of the *tāluka* is well peopled and richly tilled, but in the west the country is hilly. Except in the south it is surrounded by the hills which form the watershed of the Kāmvādi river, which runs through the *tāluka* from north to south. In the west, after the rains, the climate is malarious, but in the other parts it is generally healthy. The water-supply is fairly abundant, but far from wholesome. Rice is the chief product.

Kalyān Tāluka.—Southern *tāluka* of Thāna District, Bombay, lying between 19° 4′ and 19° 24′ N. and 73° 1′ and 73° 24′ E., with an area of 276 square miles. It contains one town, KALYĀN (population, 10,749), the head-quarters; and 224 villages. The population in 1901 was 77,087, compared with 80,171 in 1891. The density is 279 persons per square mile, or rather more than the District average. Land revenue and cesses in 1903–4 amounted to 2·2 lakhs. The *tāluka* is triangular in form, and in its western part a rich open plain. In the south and east, ranges of hills running parallel with the boundary line throw out spurs into the heart of the plain. The transport of produce is facilitated by the tidal creek of the Ulhās river and by the Great Indian Peninsula Railway. The Kālu river is navigable by boats of 10 tons for 9 miles above Kalyān town. There are disagreeable east winds in April and May; but although fever is prevalent in the cold season, the climate is on the whole temperate and healthy.

Murbād.—South-eastern *tāluka* of Thāna District, Bombay, lying between 19° 7′ and 19° 27′ N. and 73° 23′ and 73° 48′ E., with an area of 350 square miles. It contains 171 villages,

Murbād being the head-quarters. The population in 1901 was 62,569, compared with 65,641 in 1891. The density, 179 persons per square mile, is below the District average. Land revenue and cesses in 1903–4 amounted to more than 1·3 lakhs. The people are mostly Thākurs, Kolīs, and Marāthās. Most of the *tāluka* is very hilly and fairly wooded. The soil is poor and the uplands of little value, except as supplying brushwood for manure. It suffers from the want of means of exporting its produce, but a good high road now bisects it. The water supplied by wells is fairly good but scanty. The climate is oppressive, though not unhealthy; after the rains, however, it is malarious.

Salsette.—Large island forming the Salsette *tāluka* of Thāna District, Bombay, lying between 18° 53′ and 19° 19′ N. and 72° 47′ and 73° 3′ E., extending 16 miles from Bāndra northwards to the Bassein inlet, and connected with Bombay Island by bridge and causeway. The area is 246 square miles; and the island contains three towns, BĀNDRA (population, 22,075), THĀNA (16,011), the head-quarters of the District and *tāluka*, and KURLA (14,831); and 128 villages, including VESĀVA (5,426). The population in 1901 was 146,933, compared with 126,518 in 1891. It is the most densely populated *tāluka* in the District, with an average of 597 persons per square mile. Land revenue and cesses in 1903–4 amounted to about 2·6 lakhs. Along the centre of the island, from north to south, runs a broad range of hills, which, after subsiding into the plain near Kurla, crops up again in the southernmost point of the island at Trombay. The central and highest hill, Thāna peak, is 1,530 feet above sea-level; and on the north is a detached sharp peak 1,500 feet high. Spurs from the main range run west towards the sea, while the low lands are much intersected by tidal creeks, which, especially on the north-west, split the sea-face of the *tāluka* into small islands. There are no large fresh-water streams; but the supply of water from wells is of fair quality and pretty constant. The staple crop is rice; and most of the uplands are reserved for grass for the Bombay market. The coast abounds in coco-nut groves, and the palmyra palm grows plentifully in most parts. This beautiful island is rich in rice-fields, diversified by jungles, and studded with hills. The ruins of Portuguese churches, convents, and villas attest its former importance, and its antiquities at KĀNHERI still form a subject of interest. Eighteen estates, consisting of 53 villages, were granted in Salsette by the East India Company, some freehold, and others on payment of

rent, and liable to assessment. The lines of the Great Indian Peninsula Railway and of the Bombay, Baroda, and Central India Railway traverse the *tāluka*. Since the first outbreak of plague in Bombay, a large number of villa residences have been built by the wealthier merchants of Bombay near the latter railway. An additional Assistant Collector was appointed in 1902 to plan new roads and control building operations. Seized by the Portuguese early in the sixteenth century, Salsette should have passed to the English Crown, together with Bombay Island, as part of the dowry of the queen of Charles II. The Portuguese in 1662, however, contested its transfer under the marriage treaty, and it was not till more than a century afterwards that possession was obtained. The Marāthās took it from the declining Portuguese in 1739. The English captured it from the Marāthās in December, 1774, and it was formally annexed to the East India Company's dominions in 1782 by the Treaty of Sālbai.

Agāshi.—Port in the Bassein *tāluk* of Thāna District, Bombay, situated in 19° 28′ N. and 72° 47′ E., 10 miles north of Bassein and 3¼ miles west by a metalled road from Virār on the Bombay, Baroda, and Central India Railway. Population (1901), 8,506. The town contains a school with 217 pupils. In the early part of the sixteenth century Agāshi was a place of some importance, with a considerable timber and shipbuilding trade. It was twice sacked by the Portuguese—in 1530 and again in 1531. In 1530 as many as 300 Gujarāt vessels are said to have been taken; and in 1540 the Portuguese captured a ship on the stocks at Agāshi in which they afterwards made several voyages to Europe. Agāshi carries on a trade with Bombay, worth about Rs. 4,000 annually, in plantains, its dried plantains being the best in the District. There is a Portuguese school here, and a large temple of Bhavānīshankar, built in 1691. The bathing-place close to the temple has the reputation of effecting the cure of skin diseases.

Amarnāth (or Ambarnāth, literally 'Lord of the Skies,' a name of Siva).—Village in the Kalyān *tāluka* of Thāna District, Bombay, situated in 19° 12′ N. and 73° 10′ E., about a mile west of Ambarnāth station on the Great Indian Peninsula Railway, and 38 miles from Bombay. Population (1901), 485. The old temple, situated in a pretty valley less than a mile east of the village, is interesting as a specimen of ancient Hindu architecture. An inscription found in it is dated Saka 982 (A.D. 1060). It was probably erected by Māmvānirājā, the son of Chittarājādeva, a Māhāmandaleswara, or feudatory king

of the Konkan, under the Chālukyas of Kalyān in the Deccan. The temple itself faces the west, but the *mandapa* or *antarāla*, the entrance hall, has doors to the north and south. Each of the three doors has a porch, approached by four or five steps, and supported by four nearly square pillars, two of them attached to the wall. The *mandapa* is 22 feet 9 inches square. The roof of the hall is supported by four elaborately carved columns. In their details no two of them are exactly alike; but, like the pillars in the cave-temples of Ajanta, they have been wrought in pairs, the pair next the shrine being if possible the richer. The *gābhāra* or shrine, which is also square, measures 13 feet 8 inches each way. It appears to have been stripped of its ornamentation, and now contains only the remains of a small *lingam* sunk in the floor. The outside of the building is beautifully carved. The principal sculptures are a three-headed figure with a female on his knee, probably intended to represent Mahādeo and Pārvatī; and on the south-east side of the *vimāna*, Kālī. The sculpture, both on the pillars of the hall and round the outside, shows a skill not surpassed by any temple in the Presidency. A fair is held here on the Sivarātri in Māgha (February–March).

[For a more detailed account, see *Indian Antiquary*, vol. iii, p. 316 ff.; and *Bombay Gazetteer*, vol. xiv, pp. 2–8.]

Bāndra (*Wāndren*, *Bāndora*, *Vāndra*).—Town in the Salsette *tāluka* of Thāna District, Bombay, situated in 19° 3′ N. and 72° 50′ E., on the Bombay, Baroda, and Central India Railway, at the southern extremity of Salsette island, at the point where that island is connected with the Island of Bombay by a causeway and arched stone bridge, 9 miles north of Bombay City. Population (1901), 22,075, including 11,358 Hindus, 3,189 Musalmāns, 1,307 Pārsīs, and 6,117 Christians. With a few exceptions, the Christians are descended from local converts made by the Portuguese during the sixteenth and seventeenth centuries. There are numerous Roman Catholic churches in Salsette, many of which were destroyed by the Marāthās after conquering the island in 1738. The buildings of special interest are the English Church and the Chapel of Our Lady of the Mount. Bāndra was constituted a municipality in 1876. The municipal receipts during the decade ending 1901 averaged Rs. 71,000. In 1903–4 the income was a lakh, derived chiefly from water-rate (Rs. 32,000) and house and land tax (Rs. 22,000). In the municipal limits are included Bāndra hill, 150 feet in height, with a flat, wooded crest, Bāndra town, and the villages of Naupāda, Khār, Pālī, Vāroda, Chimbai,

Katwadi, Māla Sherli, Rājan, and Dānda. The local industries are the tapping of palm-trees and fishing. The Bombay municipal slaughter-house is situated at the north end of the causeway. Since the opening of railway communication, Bāndra has become a favourite place of resort for the citizens of Bombay. It possesses an orphanage and a convent known as St. Joseph's. The town contains a dispensary, a high school, a middle school for girls with 602 pupils, and two middle schools for boys with 575 pupils. There are also five vernacular schools, four for boys with 267 pupils and one for girls with 119. Public conveyances ply between the station and Bāndra and Pālī hills, where the European and Pārsī residents chiefly live.

Bassein Town (*Vasai*, that is, 'The Settlement').—Headquarters of the *tāluka* of the same name in Thāna District, Bombay, situated in 19° 20′ N. and 72° 49′ E., about 5 miles from the Bassein Road station of the Bombay, Baroda, and Central India Railway, and 28 miles north of Bombay. Population (1901), 10,702. The town was constituted a municipality in 1864, the income in 1903-4 being Rs. 17,000. In that year the total value of the seaborne trade of Bassein was 13 lakhs, of which 5 lakhs represented imports and 8 lakhs exports. The town contains a dispensary, a Sub-Judge's court, an English middle school with 53 pupils, eight vernacular schools for boys with 395 pupils, and one for girls with 71 pupils.

Bassein early attracted the notice of the Portuguese, as the river or strait separating the island from the mainland was a convenient rendezvous for shipping. In 1534 Bassein with the land in its neighbourhood was ceded to them by Bahādur Shāh, king of Gujarāt, and two years later the fort was built. For more than two centuries Bassein remained in the hands of the Portuguese, and during this time it rose to such prosperity that it came to be called the Court of the North, and its nobles were proverbial for their wealth and magnificence. With plentiful supplies of both timber and stone, Bassein was adorned with many noble buildings, including a cathedral, five convents, thirteen churches, and an asylum for orphans. The dwellings of the Hidalgos, or aristocracy, who alone were allowed to live within the city walls, are described (1675) as stately buildings, two storeys high, graced with covered balconies and large windows. Towards the end of the seventeenth century Bassein suffered severely from outbreaks of the plague, so deadly that in 1695 one-third of the population was swept away. Notwithstanding the decay of Portuguese power in the seventeenth century, Bassein, as late as 1720, would seem to have retained

much of its prosperity. In that year the population was returned at 60,499, and the revenue a few years later (1729) at as much as 4½ lakhs (Xer. 914,125). But the wealth of one city was unable to stay the advance of the Marāthā power. In 1739 Chimnājī Appa, a distinguished Marāthā general, at the head of a powerful army, appeared before Bassein. After a siege of three months, conducted on both sides with the greatest skill and courage, the garrison was forced to capitulate, and the town and district of Bassein passed into the hands of the Peshwā. Under the Marāthās, Bassein became the chief place in their territories between the Bānkot river and Damān; but they did not long keep possession of the city. In 1780, after a siege of twelve days, Bassein was captured by a British army under the command of General Goddard. By the Treaty of Sālbai (1782) it was restored to the Marāthās; and in 1818, on the overthrow of the last of the Peshwās, it was resumed by the English and incorporated with Thāna District. Here was concluded, in 1802, the treaty by which the Peshwā agreed to maintain a British subsidiary force, thus virtually dissolving the Marāthā confederacy

Of Old Bassein, the walls and ramparts remain in a state of good preservation. Within the enclosure, the ruins of the cathedral, of the Dominican convent, of the Jesuit Church of St. Paul, and of St. Anthony's Church, built as early as 1537, can still be identified.

[Dr. Da Cunha, *Antiquities of Bassein* (Bombay, 1876).]

Bhiwandi Town.—Head-quarters of the *tāluka* of the same name in Thāna District, Bombay, situated in 19° 18′ N. and 73° 3′ E., 29 miles north-east of Bombay. Population (1901), 10,354. Together with the neighbouring village of Nizāmpur, Bhiwandi forms a municipality, constituted in 1865, with an income (1903-4) of Rs. 20,700. It is supplied with water by means of an aqueduct constructed by the inhabitants with the aid of a Government contribution. The population and mercantile importance of this place are on the increase. The chief industries are weaving and rice-cleaning, and the principal articles of trade are rice, dried fish, cloth, grass, and wood. The largest steam rice-husking mill in the Presidency is situated here. The town contains a Sub-Judge's court, a dispensary, and four vernacular schools for boys with 444 pupils, and two for girls with 146.

Borivli.—Village in the Salsette *tāluka* of Thāna District, Bombay, situated in 19° 14′ N. and 72° 51′ E., on the Bombay, Baroda, and Central India Railway, about 22 miles north of

Bombay. Population (1901), 182. Borivli is a convenient centre for visiting several places of interest. The KĀNHERI CAVES lie up the Tulsī valley about five miles to the east. At Mandapeshvar, called Monpezier or Monpaçer by the Portuguese, about 2 miles north of Borivli, are situated a notable white Portuguese watch-tower, and a set of Brāhmanic caves, over a thousand years old, one of the latter being specially interesting from having been used as a Catholic chapel. On the top of the rock in which the caves are cut stands a large and high-roofed Portuguese cathedral, lately repaired, and extensive ruined buildings belonging to a college and monastery. In a mango orchard, at EKSAR, in rich wooded country about a quarter of a mile south of Mandapeshvar and a mile north-west of Borivli, are some great blocks of stone about 10 feet high by 3 feet broad. They are memorial stones richly carved with belts of small figures, the record of sea- and land-fights probably of the eleventh and twelfth centuries. About half a mile to the east of Borivli station, close to the border-lands of Poinsar and the deserted village of Māgāthan, are some Buddhist rock-cut cisterns and some half-underground Buddhist caves. A few hundred yards to the east lie some Buddhist tombs and the remains of a Buddhist monastery, probably of the fifth or sixth century. At Akurli, about 2 miles to the south-east, in rugged bush-land, rises a large mound of black trap, on the top of which are some quaint rough carvings and Pāli letters, perhaps two thousand years old. Two miles farther south, in thickly wooded uplands, is the great JOGESHVARI cave, a Brāhmanic work probably of the seventh century. The railway can be joined at Goregaon station, which is about 3 miles north-west of the Jogeshvari cave.

Dāhānu Town.—Seaport in the *tāluka* of the same name in Thāna District, Bombay, situated in 19° 58′ N. and 72° 43′ E., 2 miles from Dāhānu Road station on the Bombay, Baroda, and Central India Railway and 78 miles from Bombay. Population (1901), 4,573. Dāhānuka is named in the cave-inscriptions of Nāsik (A. D. 100). It was held by the Portuguese, and is mentioned in their annals as celebrated for its image of Nossa Senhora des Augustas, which had wrought many miracles. There is a small fort on the north bank of the Dāhānu river or creek. A large quantity of wood passes through this port from the Savta *bandar*, 6 miles up the river. The town contains a Sub-Judge's court, and two schools for boys with 358 pupils and one for girls with 60.

Dugad.—Village in the Bhiwandi *tāluka* of Thāna District,

Bombay, situated in 19° 27′ N. and 73° 7′ E., about 9 miles north of Bhiwandi town. Population (1901), 737. Dugad is perhaps Ptolemy's Dunga. It is famous for the defeat of the Marāthās by Colonel Hartley in 1780. On December 8, hearing that the Marāthās intended to throw troops into Bassein, then invested by General Goddard, Colonel Hartley, with a force of about 2,000 effective men, marched from Titvāla near Kalyān, 15 miles north-west, to Dugad. On the 10th the Marāthā general Rāmchandra Ganesh, with 20,000 horse and foot, thrice attacked the Bombay division in front and rear. On each occasion he was repulsed with little loss to the British, though two of the slain, Lieutenants Drew and Cooper, were officers. Next day (December 11) the attack was renewed, the well-served Marāthā artillery causing the British a loss of 100 men, of whom two, Lieutenants Cowan and Pierson, were officers. During the night Colonel Hartley strengthened with a breastwork and guns two knolls which covered his flanks. Next morning the Marāthās advanced in front and rear against the right knoll, Rāmchandra leading a storming party of Arab foot and 1,000 infantry under Noronha, a Portuguese officer. A thick morning fog helped the attacking force to come close to the picket. Then the mist suddenly cleared and the guns did surprising execution. Rāmchandra died fighting gallantly, Noronha was wounded, and the Marāthās, dispirited by the loss of their leaders, retired in haste and with great loss. The large tomb without inscription in the village of Akloli, 3 miles to the north, was probably raised in honour of the four British officers who fell. On the Gumtara hill close by are the remains of an old fort and water cisterns.

Eksar.—Alienated village of 701 acres in the Salsette *tāluka* of Thāna District, Bombay, situated in 19° 13′ N. and 72° 59′ E., about a mile north-west of Borivli station on the Bombay, Baroda, and Central India Railway. Population (1901), 1,906. In a mango orchard, on the west bank of a fine pond, is a row of six slabs of trap, four of them about 10 feet high by 3 broad, the fifth about 3 feet high by 3 broad, and the sixth about 4 feet high by 1 broad. All, except one which is broken, have their tops carved into funereal urns, with heavy ears and hanging bows of ribbon, and floating figures above bringing chaplets and wreaths. The faces of the slabs are richly cut in from two to eight level belts of carving, the figures in bold relief chiselled with much skill. They are Hindu *pāliyās* or memorial stones, and seem to have been set up in front of a temple which stood on the top of the pond bank, a site

afterwards occupied by a Portuguese granary. Each stone records the prowess of some warrior either by land or sea.

[For a full description of these stones, which possess features of unusual interest, see *Bombay Gazetteer*, vol. xiv, pp. 57-9.]

Ghodbandar (supposed to be the *Hippokura* of Ptolemy).—Port in the Salsette *tāluka* of Thāna District, Bombay, situated in 19° 17′ N. and 72° 54′ E., on the left bank of Bassein creek, 10 miles north-west of Thāna. Population (1901), 646. The customs division called after Ghodbandar comprises five ports: namely, Rai Utan, Manori, Bāndra, Vesāva, and Ghodbandar. The total trade of these five ports in 1903-4 was 7⅔ lakhs, of which 2⅓ lakhs represents imports and 5⅓ lakhs exports, the last consisting of rice, stone, lime, sand, coco nuts, salt, fish, and firewood. The imports are hardware, cloth, groceries, rice, oil, molasses, butter, tobacco, gunny-bags, *san*-hemp, and timber. Under the Portuguese, Ghodbandar stood a siege by the Marāthā Sivajī, who appeared before it in 1672. In 1737 it was captured by the Marāthās, and the Portuguese garrison put to the sword. Fryer (1675) calls the town Grebondel. A resthouse on the shore has accommodation for 50 travellers. There are some Portuguese architectural remains. The traders in Ghodbandar are Agrīs, Kolīs, Muhammadans, and Christians, and most of them trade on borrowed capital.

Jogeshvari.—Cave in the Salsette *tāluka* of Thāna District, Bombay, situated in 19° 13′ N. and 72° 59′ E., 2½ miles south-east of Goregaon station, on the Bombay, Baroda, and Central India Railway. It is the third largest of the great Brāhmanical caves of India, the others being Sītā's Bath at Ellora and the Great Cave at Elephanta. Its length is 240 and breadth 200 feet. This cave-temple, which dates from the seventh century, contains rock-cut passages, an immense central hall supported by pillars, porticoes, and subsidiary courts.

[Du Perron (1760), *Zend Avesta*, vol. i, pp. ccclxxxviii-cccxc; Hunter (1784), *Archaeologia*, vol. vii, pp. 295-9; Salt (1806), *Transactions of the Bombay Literary Society*, vol i, pp. 44-7; *Bombay Gazetteer*, vol. xiv, pp. 110-2.]

Kalyān Town.—Head-quarters of the *tāluka* of the same name in Thāna District, Bombay, situated in 19° 14′ N. and 73° 10′ E., at the junction of the north-east and south-east lines of the Great Indian Peninsula Railway, 33 miles north-east of Bombay. Population (1901), 10,749. Kalyān has been a municipality since 1855. The municipal income during the decade ending 1901 averaged Rs. 19,000. In 1903-4 the income was Rs. 16,579. It has a considerable rice-husking

trade, carried on by Muhammadans and some Marāthās. This industry gives occupation to about 750 persons, half of whom are women. There is also a trade in tobacco, dried fish, bricks, tiles, and myrabolams. The streets and lanes in the town are metalled, and kept in clean condition. A ferry plies across the Ulhās river to Kone on the opposite bank. The town has a vegetable market built by the municipality. It is supplied with water from the Shenala lake about a quarter of a mile to the east.

The name of Kalyān appears in ancient inscriptions, which have been attributed to the first, second, fifth, or sixth century A.D. According to the *Periplus*, Kalyān rose to importance about the end of the second century. Cosmas Indicopleustes, in the sixth century, mentions it as one of the five chief marts of Western India, the seat of a powerful king, with a trade in brass, black-wood logs, and articles of clothing. Early in the fourteenth century the Muhammadans found Kalyān the capital of a district, and gave it the name of Islāmābād. It was taken by the Portuguese in 1536. They did not garrison the town, but, returning in 1570, burnt the suburbs and carried off much booty. From this time it seems to have formed part of the Ahmadnagar kingdom. In 1648 Sivajī's general, Abājī Sondeo, surprised Kalyān and took the governor prisoner. The Muhammadans recovered the town in 1660, but again lost it in 1662. In 1674 Sivajī granted the English leave to establish a factory. The Marāthās in 1780 having cut off their supplies, Kalyān was seized by the British, and has since remained in their possession. Objects of interest are the Shenali tank, said to have been built in 1505; the tomb of Motabar Khān, minister of Shāh Jahān, who was sent in disgrace to Kalyān when Aurangzeb usurped his father's throne; and seven mosques, of which the graceful Kālī Masjid is the most noteworthy. The town contains a Sub-Judge's court, a dispensary, an English school with 87 pupils, seven vernacular schools for boys with 358 pupils, and one for girls with 96. There are also a library, a small printing press, and a rice-husking mill.

Kānheri Caves.—Caves in Thāna District, Bombay, situated in 19° 13′ N. and 72° 59′ E., in a wild picturesque valley in the heart of the island of Salsette, about 6 miles from Thāna. They may be reached from the Bhāndup station of the Great Indian Peninsula Railway, or from the Borivli station of the Bombay, Baroda, and Central India Railway. The name Kanhagiri, perhaps a Prākrit corruption of the

Sanskrit Krishnagiri or 'Krishna's hill,' seems to show that the fame and holiness of Kānheri date from before the rise of Buddhism. From the simple style of some of them, and an inscription in the caves at Nāsik, it is presumed that they date from 100 B.C. to A.D. 50. Additions both of fresh caves and of new ornaments in old caves seem to have been made in the fourth, fifth, and sixth centuries A.D. The caves consist of numerous dwellings and some *chaityas* or relic shrines. In all, there are upwards of a hundred excavations. Except the *chaityas* and the peculiarly planned cave known as the Darbār cave, they have stone sleeping benches running round the walls. There are some fifty-four inscriptions, which have been partly deciphered, relating the names of the builders. The cathedral or large *chaitya* cave is the most important of the group. In front of it were once two or three relic mounds, of which the largest was built of stone and brick and was from 12 to 16 feet high. The Darbār cave or 'place of assembly' is the next largest, and is distinguished by two long low seats or benches running down the whole length of the centre.

[For a full description of the Kānheri caves, see *Bombay Gazetteer*, vol. xiv, pp. 121-95.]

Kelve-Māhīm.—Head-quarters of the Māhīm *tāluka* of Thāna District, Bombay, situated in 19° 36′ N. and 72° 44′ E., about 5 miles west of Pālghar station on the Bombay, Baroda, and Central India Railway, and 56 miles north of Bombay. Population (1901), 5,699. The village of Kelve, whose name is thus joined with Māhīm, lies on the opposite side of a creek about 2½ miles to the south. The coast is very rocky near the harbour, and a reef stretches for 2 miles from the shore. A small island fort lies opposite the village of Kelve. Near the two creeks which form the harbours of Māhīm and Kelve are two small forts, forming links in the chain built by the Portuguese along the coast of the *tāluka*. The town is to a large extent occupied by gardens, and has a fair trade in plantains, sugar-cane, ginger, and betel-leaf. Delhi Musalmāns had possession of Māhīm in 1350; Gujarāt governors succeeded; in 1532 the Portuguese occupied it; and in 1612 it was bravely held against the Mughals. The tomb of a Portuguese nobleman has been unearthed and its slab placed in the Collector's garden at Thāna. Kelve-Māhīm has been a municipal town since 1861. During the decade ending 1901 the income averaged Rs. 8,000. In 1903-4 the income was Rs. 7,700. Kelve village was included in the Māhīm municipality in 1890. The town contains a dispensary, and

six schools for boys with 356 pupils and one for girls with 51 pupils.

Kurla.—Town in the Salsette *tāluka* of Thāna District, Bombay, situated in 19° 4′ N. and 72° 53′ E., on the eastern extremity of Salsette island, at the point where it is connected with the Island of Bombay by the Sion causeway. It is also a station on the Great Indian Peninsula Railway. The town has two cotton mills, of which the Swadeshi Mill, owned by a Pārsī firm, is one of the largest in India. Population (1901), 14,831, compared with 9,715 in 1891. The large increase is partly due to the exodus of people from Bombay during the plague. Many have now made Kurla their permanent residence. The municipality was established in 1879. During the decade ending 1901 the income averaged Rs. 25,000. In 1903–4 the income was Rs. 35,000. The town contains six schools, attended by 339 pupils (including 56 girls), and a dispensary.

Māgāthan.—Village in the Salsette *tāluka* of Thāna District, Bombay, half a mile east of Borivli station on the Bombay, Baroda, and Central India Railway, and 22 miles from Bombay. Population (1901), 592. It is noted for the Māgāthan or Poinsar Buddhist caves, including a chapel cave on the south and a monastery cave on the north. The latter, which is now roofless, included a central hall, about 25 feet square and 8 feet high, and two aisles on the east and west, with two plain pillars and two pilasters, the aisles being 25 feet long and 6 feet deep. In the back wall are two plain cells about 5 feet square and 5 feet high. The only carving is a mark like a crescent or a pair of sharp horns on the north pilaster of the east veranda. Through the wall of the monastery cave a passage leads into the chapel cave. The rock, which has worn into a rough surface like pudding-stone, has lost most of its carving. Enough remains to show that the work is late, perhaps of the sixth or seventh century. The image of Buddha can hardly be traced, but it seems to have been seated. On the wall are the remains of some figures, one being a seated Buddha. The pillars of the chapel veranda are cushioned-capitalled like those of Elephanta, but are probably older. To the south are other plain caves. To the east is a rock-cut cistern. On the west bank of a double pond, about 200 yards north of the cistern, are two old Musalmān tombstones, rather finely carved, with hanging chains. About 300 yards to the east, on a low mound covered with grass, *karanda* bushes, and brab palms, are two Buddhist *dagobas*. They are of dressed trap, about 2 feet

3 inches square at the foot, and rise, with moulding and flat bands, in a cone about 3 feet 4 inches long, about 6 feet round at the middle, and 5 feet near the top. On the top are traces of a broken *tee*. There are numerous other remains of interest.

[See *Bombay Gazetteer*, vol. xiv, pp. 216–8.]

Malanggarh (*Bāwa Malang*).—Hill fortress in the Kalyān *tāluka* of Thāna District, Bombay, situated in 19° 7′ N. and 73° 13′ E., 10 miles south of Kalyān town. It is known also as the Cathedral Rock. Like most of the Thāna hill forts, Malanggarh rises in a succession of bare stony slopes, broken by walls of rock and belts of level woodland. It is most easily reached from Kalyān across a rough roadless tract of about 8 miles, ending in a climb of a perpendicular height of about 700 feet. Connected with the base of the hill is a forest-covered table-land, upon which is the tomb of the Bāwa Malang. At the time of Captain Dickinson's survey in 1818, there were a few dwellings for the garrison here, of which the ruined sites alone remain. From this table-land the ascent to the lower fort is very steep, and upwards of 300 feet high. The latter part is by an almost perpendicular rock-hewn staircase, at the top of which is a strong gateway covered by two outstanding towers, enabling even the smallest garrison to make the place impregnable. From the lower to the upper fort there is a perpendicular ascent of 200 feet by means of a narrow flight of rock-hewn steps, on the face of a precipice so steep as to make the ascent at all times most difficult and dangerous. The upper fort, a space of 200 yards long by about 70 broad, is nothing more than the top, as it were, of the third hill. It has no fortifications, but there are traces of an enclosure and of the walls of an old building. The water-supply is from a range of five cisterns, and a copper pipe is used to carry water to the lower fort. A yearly fair, held here in February, is attended by both Hindus and Muhammadans.

Nirmal Village (or 'The Stainless').—Village in the Bassein *tāluka* of Thāna District, Bombay, situated in 19° 24′ N. and 72° 47′ E., 6 miles north of Bassein town. Population (1901), 243. It is one of the most sacred places in the District, having a much venerated *lingam*, and being, according to tradition, the burying-place of one of the great Sankarāchāryas, the apostles of the modern Brāhmanic system. Here, on the anniversary of his death, Kārtik Vadya 11th (November), a large fair is held, which lasts for a week and

is attended by about 7,000 pilgrims—Hindus, Musalmāns, Christians, and a few Pārsīs. The principal articles sold are brass and copper vessels, dry plantains, sweetmeats, cloth, and cattle. There are eight temples at Nirmal, all built about 1750 by Shankarjī Keshav, *Sar-sūbahdār* of Bassein. A yearly grant of Rs. 454 is sanctioned by Government towards the maintenance of a Brāhman almshouse (*anna-chhatra*), and Rs. 48 towards a Bairāgi almshouse. The Portuguese pulled down the old temples and destroyed the *lingam*. The stones which they built into Christian churches were probably taken from these old temples. On the capture of Bassein by the Marāthās (1739) Nirmal was purified, prints of the feet of Sri Dattātraya took the place of the *lingam*, and a reservoir was built. There is a church dedicated to Santa Cruz, which was rebuilt by the parishioners in 1856, at a cost of about Rs. 24,000. In front of a house in the village, about 500 yards north of the chief temple, is a long dressed stone with some letters which seem part of a Sanskrit inscription of the seventh century.

Sanjan.—Village in the Dāhānu *tāluka* of Thāna District, Bombay, situated in 20° 12′ N. and 72° 51′ E., with a station on the Bombay, Baroda, and Central India Railway. Sanjan was in former times a trading town of considerable importance, and according to tradition was founded by one Rāja Gaddhe Singh. It covered so large an area that it earned the name of Navteri Nagari, or the city which measured 9 *kos* by 13. Although some authorities suppose that the Sanjan in which the Pārsī refugees from Persia settled about 720 was a town of that name in Cutch, there are better grounds for believing that it was Sanjan in Thāna District, which is mentioned under the name of Hamjaman in three Silahāra land grants of the tenth and eleventh centuries. By the Arab geographers of the same period the town is repeatedly spoken of, under the name of Sindan, as one of the chief ports of Western India. In 915 it was described as a great city with a Jāma Masjid, and as famous for the export of a fine emerald, known as the Mecca emerald owing to its having been brought from Arabia. Al Idrīsi speaks of it in the twelfth century as peopled with industrious and very intelligent inhabitants, large, rich, and warlike, and enjoying a great export and import trade: and it doubtless maintained its wealth and importance till the beginning of the fourteenth century, when it was attacked and after a fierce resistance stormed by Alaf Khān, general of Alā-ud-dīn Khiljī. Its Pārsī citizens were killed, enslaved, or

driven to the hills, and most of those who escaped settled at Nargol, about four miles away, which is still one of the largest Pārsī villages on the coast. From that date little is heard of Sanjan until 1534, when it was captured by the Portuguese. Pyrard de Laval and Sir T. Herbert both mention it during the early years of the seventeenth century as subject to Portugal; and the latter writer terms the place St. John (i. e. Sanjan) de Vacas, which is identical with the St. John or St. John's Peak known to English navigators of that period. Sanjan had by this time lost much of its former importance, and yielded through its customs-house a revenue of only £23 (620 pardaos). It was guarded by a fort built in 1613 by the Portuguese and described by a writer of that nation in 1634 as a round fort with six bastions, enclosing a very handsome well and two ponds, some houses, an arsenal, and a church. The population of the fort then consisted of a commandant and twenty soldiers, a clerk, an inspector, a priest, and forty-two families of Portuguese and native Christians. The garrison were accustomed to add to their pay by cultivation. Dr. Hové, the Polish savant, visited the town in 1787.

Sanjan at the present day contains the remains of several large ponds and lakes, which are filled with silt and are utilized for cultivation. Bricks of an antique type lie scattered over the surrounding fields and form the walls of most of the ruined buildings. Apart from these, the antiquities of Sanjan consist of some carved slabs, the remains of a Pārsī 'tower of silence' (1300–1500), the ruins of the Portuguese fort mentioned above, and two inscribed slabs, one bearing Hindu characters and dated 1432, and the other Kūfic characters of eight centuries ago. The latter was probably erected originally over the grave of one of the Arab merchants whose descendants, the Navaits, still form a separate class in the coast towns of Thāna District. Sanjan also contains two European graves of unknown date.

Sofāle (*Safāle*).—Village in the Māhīm *tāluka* of Thāna District, Bombay, situated in 19° 34′ N. and 72° 50′ E., on the Bombay, Baroda, and Central India Railway, 8 miles south-east of Māhīm town. Population (1901), 769. The fact that Abul Fida (1320) mentions a Sefareh in India and a Sefareh in Africa as ports of inter-communication seems to show that Sofāle was the Konkan terminus of the trade with the African coast that probably reached back to prehistoric times.

Sopāra.—Ancient town in the Bassein *tāluka* of Thāna District, Bombay, situated in 19° 25′ N. and 72° 48′ E., about 3½ miles north-west of Bassein Road and about the same dis-

tance south-west of Virār on the Bombay, Baroda, and Central India Railway. Population (1901), 486. Sopāra is said to have been the capital of the Konkan from 500 B.C. to A.D. 1300. It is still a rich country town, with a crowded weekly market. Under the name of Shurpāraka, it appears in the Mahābhārata as a very holy place, where the five Pāndava brothers rested on their way to Prabhās. According to Buddhist writers, Gautama Buddha, in one of his former births, was Bodhisattva of Sopāra. This old Indian fame gives support to the suggestion that Sopāra is Solomon's Ophir. Jain writers make frequent mention of Sopāra. Under the names Sopāraka, Sopāraya, and Shorpāraga, it is mentioned in old inscriptions, about the first or second century B.C. The author of the *Periplus* in the third century A.D. mentions Ouppara between Broach and Kalyān as a local mart on the coast.

Tārāpur-Chinchani.—Port and group of two villages in the Māhīm and Dāhānu *tālukas* of Thāna District, Bombay, situated in 19° 52′ N. and 72° 41′ E. The village of Chinchani lies on the north bank and Tārāpur on the south bank of the Chinchani-Tārāpur creek, 15 miles north of Māhīm. Population (1901), 7,051, largely consisting of Pārsī and Vānī money-lenders. Chinchani is a very old town, the Chechijna of a Nāsik cave inscription of the first century. In the Pārsī quarter of Tārāpur there is a fire-temple built about 1820 by a well-known Pārsī contractor, Vikayjī Mehrjī. Tārāpur is a seaport. The value of trade in 1903-4 was 15½ lakhs; namely, imports 6 lakhs and exports 9½ lakhs. The imports consist chiefly of rice, salt, sugar, kerosene, and iron; and the exports, of rice, unsalted fish, and firewood. The villages contain a dispensary, and an English middle school with 29 pupils.

Thalghāt (or Kāsāraghāt).—Pass in the Western Ghāts, on the boundary of Thāna and Nāsik Districts, Bombay, situated in 19° 43′ N. and 73° 30′ E., 65 miles north-east-by-north of Bombay City. The Thalghāt is, for purposes of trade, one of the most important in the range of the Western Ghāts, and as an engineering feat is rivalled only by the Borghāt farther south. It is traversed by two lines of communication, road and rail. The road is the main line between Bombay and Agra. It still conveys a large traffic coastwards in grain, and eastwards in salt and sundries. The railway is the north-eastern branch of the Great Indian Peninsula line. The summit of the railway incline is 1,912 feet above the level of the sea; the maximum gradient is 1 in 37; and the extreme curvature is 17 chains radius.

Thāna Town.—Head-quarters of Thāna District, Bombay, and also of the Salsette *tāluka*, situated in 19° 12′ N. and 72° 59′ E., on the Great Indian Peninsula Railway, 21 miles north-east of Bombay City. Population (1901), 16,011. Thāna is prettily situated on the west shore of the Salsette creek, in wooded country. The fort, the Portuguese cathedral, a few carved and inscribed stones, and several reservoirs, are now the only signs that Thāna was once an important city. At the close of the thirteenth century the fortunes of Thāna seem to have been at their highest. It was the capital of a great kingdom, with an independent ruler. It was celebrated for producing *tanushi*, a kind of striped cotton cloth, which is still known as Thāna cloth. In 1318 Thāna was conquered by Mubārak Khiljī, and a Muhammadan governor was placed in charge. A few years later four Christian missionaries were murdered here by the new rulers. In 1529, terrified by the defeat of the Cambay fleet and the burning of the Bassein coast, 'the lord of the great city of Thāna' became tributary to the Portuguese. This submission did not save him in the war that followed. The city was thrice pillaged, twice by the Portuguese and once by the Gujarātis. It was then, under the treaty of December, 1533, made over to the Portuguese. Under Portuguese rule Thāna entered on a fresh term of prosperity. In 1739, with the loss of Bassein, the Portuguese power in Thāna came to an end. In 1771 the English, urged by the news that a fleet had left Portugal to recover Salsette and Bassein, determined to gain possession of Thāna. Negotiations for its cession failing, a force was dispatched to capture it. On December 28, 1774, the fort was stormed, and the greater part of the garrison put to the sword.

Thāna has been a municipal town since 1863, with an average income during the decade ending 1901 of Rs. 37,000. In 1903–4 the income was Rs. 38,000. The only public works of importance are the Pokarna water-works which supply the town. Thāna being less than an hour's journey from Bombay, many Government officials and business men now reside there, visiting Bombay daily. The town contains the usual public offices, a Sub-Judge's court, a civil hospital, and a dispensary. The chief Portuguese building is the fort, now used as a jail. It was built in 1737. Besides the civil hospital and a dispensary, there is an asylum for lunatics in Navāpāda, about one mile from the railway station. The chief educational institutions are the Bairāmjī Jījībhoy High School opened in 1880, an English school for girls, and an English middle

school for boys. The number of pupils at these in 1903-4 was 253, 79, and 69 respectively. The town also contains four vernacular schools for boys with 505 pupils, and two for girls with 185.

Trombay (*Turmbhen*).—Port in the Salsette *tāluka* of Thāna District, Bombay, situated in 19° 2′ N. and 72° 57′ E., about 3 miles north-east of Bombay City. Population (1901), 2,772. Trombay is a hamlet with a few huts, port and sea-customs offices, a salt store, and a ruined Portuguese church, with a well-preserved vaulted chapel 22 feet long, 22½ feet high, and 22 feet wide. The value of the trade in 1903-4 was returned at 71½ lakhs: namely, imports 40½ lakhs and exports 31 lakhs. The imports are chiefly cattle, gunny-bags, grass, and teak, and the exports rice, salt, firewood, and grass. The village contains a leper home.

Tungār.—Hill in the Bassein *tāluka* of Thāna District, Bombay, situated in 19° 26′ N. and 72° 55′ E., about 9½ miles from Bassein Road, on the Bombay, Baroda, and Central India Railway, to the summit, which is 2,200 feet high. Like most Konkan hills, Tungār is trap, capped by a layer of iron-clay or laterite from 200 to 300 feet deep. The sides are clothed with forest. Its comparatively light rainfall and its openness to the sea make Tungār a very desirable site for a sanitarium. The hill is inhabited by Kolīs and Vārlis.

Vajrābai (or Vajreshvari, 'The Lady of the Thunderbolt'). —Sacred spot in the Bhiwandi *tāluka* of Thāna District, Bombay, situated in 19° 29′ N. and 73° 5′ E., 12 miles north of Bhiwandi, near the bed of the Tānsa river, in the village of Vadavli. It is famous for its hot springs, which form one group in a line that appears here and there along 4 miles of the river's course. The rock is a common reddish trap, pierced by occasional dikes of hard black basalt. The water does not nearly approach the boiling point; it is tasteless, and the strong sulphurous smell, which pervades the neighbourhood of the spring, is due less to the water than to the bubbles of gas which rise through it. According to tradition the hot water is the blood of a demon, or *rākshas*, slain by the goddess Vajrābai, who became incarnate in this neighbourhood to clear it of demons and giants. The people of the place know little about Vajrābai; and her chronicle, or *mahātmya*, is kept at the village of Gunj, some 6 miles to the north. Her temple is a handsome building, well placed at the top of a flight of steps on a spur of the Gumtara range. A large fair, attended by about 5,000 persons of all castes, is held here in Chaitra

(April), at which large quantities of sweetmeats, fruit, grain, cloth, fish, wood, cattle, and ornaments are sold. There are other hot springs in the neighbourhood, at Akloli and Ganeshpuri. The former are close to a temple of Rāmeshvar. In 1784 they were much used both by natives and Europeans, and Forbes described them as a small cistern with water at a temperature of 120°. Except that it wanted the small element of iron, the water tasted like that at Bath in England.

Vesāva.—Town in the Salsette *tāluka* of Thāna District, Bombay, situated in 19° 9′ N. and 72° 51′ E. Population (1901), 5,426. Close to it is the island of Madh, containing an old fort rebuilt by the Marāthās. Vesāva is a place of some commercial importance, its chief imports being grain, rice, teak, firewood, and coal-dust, valued at about 1·1 lakhs annually, and its exports lime and uncured fish, valued at nearly 4½ lakhs annually. During the last seven years several houses have been erected by native merchants of Bombay at Vesāva, which is now connected by a good road with the railway stations of Andheri and Santa Cruz. The town contains a boys' school with 28 pupils.

CENTRAL DIVISION

Central Division.—This Division lies between 16° 48′ and 22° 2′ N. and 73° 15′ and 76° 26′ E., and comprises the Districts of AHMADNAGAR, KHĀNDESH, NĀSIK, POONA, SĀTĀRA, and SHOLĀPUR. It extends from the Sātpurās in the north to the Bhīma in the south-east, and has an area of 37,192 square miles and a population (1901) of 5,944,447. The total population increased by 18 per cent. during the twenty years previous to 1891, but in the next decade there was a decrease of 4 per cent., due to plague and famine. The density is 159 persons per square mile, being slightly higher than the average of the British Districts in the Presidency. Classified according to religion, Hindus form 92 per cent. of the total, and Muhammadans 6 per cent., while other religions include 73,830 Jains, 43,130 Christians, 4,263 Pārsīs, and 11,697 Animists.

The following table shows the area, population, and land revenue and cesses of each District comprised in the Division:—

District.	Area in square miles.	Population, 1901.	Land revenue and cesses, 1903-4, in thousands of rupees.
Ahmadnagar . .	6,586	837,695	18,04
Khāndesh* . .	10,041	1,427,382	46,06
Nāsik . . .	5,850	816,504	17,68
Poona . . .	5,349	995,330	15,18
Sātāra . . .	4,825	1,146,559	21,96
Sholāpur . .	4,541	720,977	12,31
Total	37,192	5,944,447	1,31,23

* In 1906 Khāndesh was divided into two Districts, called West and East Khāndesh. *See* KHANDESH DISTRICT.

Excepting Khāndesh, which lies mainly in the Tāpti valley, all the Districts form part of the great Deccan plain. The Division contains 75 towns and 8,819 villages. The largest towns are POONA (153,320 with cantonments), AHMADNAGAR (42,032), BĀRSI (24,242), DHŪLIA (24,726), NĀSIK (21,490),

PANDHARPUR (32,405), SĀTĀRA (26,022), and SHOLĀPUR (75,288). The chief places of commercial importance are Poona, which is the head-quarters of the Commissioner, and Sholāpur. Nāsik and Pandharpur are famous for religious gatherings. Sātāra was the capital of the Marāthā Rājās from the time of Sivajī's successor till the Peshwās. Kārli near Poona has cave-temples of archaeological interest. Junnar in Poona District was once famous as the capital of the early dynasties of Kshatrapas, and has many interesting remains. Poona is also the rainy season head-quarters of the Government of Bombay, and contains a College of Science, the only one in the Presidency.

Under the supervision of the Commissioner of the Central Division are the following Political Agencies:—

Agency.	Name of State.	Area in square miles.	Population, 1901.	Gross revenue, 1903-4, in thousands of rupees.
Poona . . .	Bhor . . .	1,491	137,268	3,69
Sātāra . . .	Aundh and Phaltan .	844	109,660	4,31
Nāsik . . .	Surgāna . . .	360	11,532	19
Sholāpur . .	Akalkot . . .	498	82,047	4,57
	Total	3,193	340,507	12,76

Ahmadnagar District.—District in the Central Division of the Bombay Presidency, lying between 18° 20′ and 19° 59′ N. and 73° 37′ and 75° 41′ E., with an area of 6,586 square miles. To the north-west and north lies Nāsik District; on the north-east the line of the Godāvari river separates Ahmadnagar from the Dominions of the Nizām; on the extreme east, from the point where the boundary leaves the Godāvari to the extreme northern point of Sholāpur District, it touches the Nizām's Dominions, a part of the frontier being marked by the Sīna river; on the south-east and south-west lie the Districts of Sholāpur and Poona, the limit towards Sholāpur being marked by no natural boundary, but to the south-west the line of the Bhīma, and its tributary the Ghod, separate Ahmadnagar from Poona; and farther north the District stretches westward, till its lands and those of Thāna meet on the slopes of the Western Ghāts. Except in the east, where the Dominions of the Nizām run inwards to within 10 miles of Ahmadnagar city, the District is compact and unbroken by the territories of Native States, or outlying portions of other British Districts.

Boundaries, configuration, and hill and river systems.

The principal geographical feature of the District is the

chain of the Western Ghāts, which extends along a considerable portion of the western boundary, throwing out many spurs and ridges towards the east. Three of these spurs continue to run eastwards into the heart of the District, the valleys between them forming the beds of the Pravara and Mulā rivers. From the right bank of the Mulā the land stretches in hills and elevated plateaux to the Ghod river, the south-western boundary of the District. Except near the centre of the eastern boundary, where the hills rise to a considerable height, the surface of the District eastwards, beyond the neighbourhood of the Ghāts, becomes gradually less broken. The highest peaks in the District are in the north-west: the hill of KALSŪBAI, believed to attain a height of 5,427 feet above the sea; and the Marāthā forts of Patta and HARISCHANDRAGARH. Farther south, about 18 miles west of Ahmadnagar city, the hill of Pārner rises about 500 feet above the surrounding table-land and 3,240 feet above sea-level. The chief river of the District is the GODĀVARI, which for about 40 miles forms the boundary on the north and north-east. The streams of the Pravara and Mulā, flowing eastwards from the Western Ghāts along two parallel valleys, unite, and after a joint course of about 12 miles fall into the Godāvari in the extreme north-east of the District. About 25 miles below the junction of the Pravara, the Godāvari receives on its right bank the Dhora, which rises in the high land in the east, and runs a northerly course of about 35 miles. The southern parts are drained by two main rivers, the Sīna and the Ghod, both tributaries of the BHĪMA. Of these, the Sīna, rising in the highlands to the right of the Mulā, flows in a straight course towards the south-east. The Ghod, rising in the Western Ghāts and flowing to the south-east, separates the Districts of Ahmadnagar and Poona. The Bhīma itself, with a winding course of about 35 miles, forms the southern boundary of the District. Besides the main rivers, there are several tributary streams and water-courses, many of which in ordinary seasons continue to flow throughout the year.

Geology. No detailed geological survey of the District exists. From some observations of Mr. Blanford's, published in 1868 in the *Records of the Geological Survey of India*, it is known that Ahmadnagar consists principally of horizontal beds of basalt belonging to the Deccan trap series. The valley of the Godāvari in the neighbourhood of Paithan is occupied by pliocene or pleistocene gravels, shales, and clays, containing bones of extinct mammalia.

The District, particularly the Akola *tāluka*, possesses a varied flora, the Konkan forest type being prevalent on the rainy Ghāts, and the less numerous Deccan types appearing on the plains and hills to the eastward. The banyan, *nandruk*, *babūl*, *nīm*, and mango grow on most roadsides; and, among wild flowers, *Clematis*, *Cleome*, *Capparis*, *Hibiscus*, *Heylandia*, *Crotalaria*, *Indigofera*, *Ipomoea*, and *Leucas* are common. Pomegranates and melons of good quality are grown in the District. Botany.

Tigers are seldom found, but leopards are not uncommon. Wolves are occasionally met with. In the open country antelope are numerous. Among game-birds, partridge, quail, and sand-grouse are noticeable. There are a few duck and snipe. Hares are common. Fauna.

The climate is on the whole genial. The cold season from November to February is dry and invigorating. A hot dry wind from the north-east then sets in, lasting from March to the middle of May, when sultry oppressive weather succeeds, till, with the break of the south-west monsoon about the middle of June, the climate again becomes temperate and continues agreeable till the close of the rains in either early or late October. The temperature varies from 45° in January to 106° in May, the average being 75°. During the twenty years ending 1903, the annual rainfall at Ahmadnagar averaged 23 inches. The heaviest rainfall, namely 26 inches, occurs in the Jāmkhed and Shevgaon *tālukas*, and the lightest, 18 to 19 inches, in Sangamner, Karjat, Shrīgonda, and Kopargaon. Frost has occasionally been registered in the District during the last thirty years, and severe hailstorms are not unknown. Climate, temperature, and rainfall.

The early history of Ahmadnagar centres in Paithan in the Nizām's territory on the left bank of the Godāvari. The country was held from about 550 to 757 by the Western Chālukyas of Bādāmi. It then passed into the hands of the Rāshtrakūtas, who retained it till 973. They were followed by the Western Chālukyas of Kalyāni (till 1156), the Kalachuris (1187), and the Deogiri Yādavas, who were displaced by the Musalmāns in 1294; but the power of the Deogiri Yādavas was not crushed till 1318. In 1346 there was widespread disorder. The governors appointed from Delhi were replaced in that year by the Bahmani Sultāns of the Deccan, who held their court at Daulatābād and then at Gulbarga and Bīdar. About 1490 the governor in charge of the country revolted and succeeded in establishing himself as an independent ruler. He founded the Nizām Shāhi dynasty, and built the city and History.

fort of Ahmadnagar on the field of his victory. In the sixteenth century the kingdom extended over the Konkan as far as Kalyān, but progress on either side was checked by the Fārūki dynasty in Khāndesh and the Bijāpur kings, whose dominions almost surrounded it. The history of the State is in fact the history of the local wars in which it engaged to extend its rule or to maintain its existence, until it was subdued by the Mughals in 1600; it again became independent under Malik Ambar, and enjoyed a gleam of prosperity until it was finally subverted by Shāh Jahān in 1635. Marāthā inroads commenced in the reign of Aurangzeb, who died here, and on the decay of Mughal power the fort was surrendered to the Marāthās in 1759. The Peshwā granted it to Sindhia in 1797, and in 1803 it capitulated to the British under Wellesley. It was restored at the peace; but in 1817, after the fall of the Peshwā, the District finally became British. The Nizām ceded 107 villages in 1882 and Sindhia 120 villages in 1861, which were added to the District. In recent years Ahmadnagar received the first batch of Boer prisoners sent to India during the South African War. About 500 arrived in Ahmadnagar in April, 1901, and were confined in the fort till the close of the war.

Archaeology. The District possesses some cave-temples, and numerous Hemādpanti remains dating from the twelfth century. The Brāhmanical Dhokeshwar caves in Pārner are ascribed to the middle of the sixth century, and the caves and temple of HARISCHANDRAGARH to the Hemādpanti era. A few Musalmān buildings, now reduced to ruins, are to be found in AHMADNAGAR CITY. A beautiful little mosque known as the Damri Masjid stands to the north of the fort. Hemādpanti temples, built of stone pieced together without mortar, and ascribed by the people to the Gauli Rāj, which are found at SHRĪGONDA, Pedgaon, Harischandragarh, Akola, Jāmkhed, Rassin, Telangsi, and many other places, appear to have been built in the days of the Yādavas of Deogiri. The Lakshmī Nārāyan temple at Pedgaon is profusely decorated, and its outer walls are richly embellished with sculptured figures. It belongs to the thirteenth century. There are numerous forts of historic interest in the District. At Manjarsamba, 8 miles north of Ahmadnagar, a fort crowning the Dongargaon hill is said to have been the favourite haunt of Vālmīki, the author of the Rāmāyana, and reputed founder of the Mahādeo Kolīs. The forts of Palia and Harischandragarh have already been mentioned. At the end of the Pravara valley, 18 miles west

of Akola, is the fort of Ratangarh, the rock-hewn gates of which command a magnificent view over the Konkan. The forts are supplied with water by cisterns cut in the rock of the hills on which they stand. Temples of importance are found at Sidhtek and Miri.

The number of towns and villages in the District is 1,349. The population at the last four enumerations was: (1872) 777,251, (1881) 750,021, (1891) 888,755, and (1901) 837,695. The decline during the last decade was due to the famine of 1896–1900. The distribution in 1901 was as follows:— The people.

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Kopargaon	519	1	122	73,539	142	− 18	3,175
Akola	572	...	157	70,566	123	+ 4	1,557
Sangamner	704	1	151	90,381	128	+ 9	3,584
Rāhuri	501	1	112	83,494	167	+ 29	4,038
Nevāsa	621	...	147	65,503	105	− 26	3,574
Shevgaon	678	1	179	92,384	136	− 8	4,059
Pārner	727	...	117	72,617	100	− 8	2,344
Ahmadnagar	624	2	117	128,094	205	+ 3	10,139
Jāmkhed	460	1	75	64,258	140	− 16	2,997
Shrīgonda	615	1	83	61,240	100	− 8	2,310
Karjat	565	...	81	35,619	63	− 28	1,350
District total	6,586	8	1,341	837,695	127	− 6	39,127

The chief towns are AHMADNAGAR, the District headquarters, SANGAMNER, PĀTHARDI, VĀMBORI, and KHARDA. The average density of population is 127 persons per square mile; but the Karjat *tāluka*, the most thinly populated owing to the large extent of rocky and uncultivable land, has a density of only 63 persons per square mile. Marāthī is spoken by 90 per cent. of the total population. Some of the Bhīl tribes in the hills speak a dialect of Marāthī. Of the population in 1901, 90 per cent. were Hindus, 5 per cent. Musalmāns, 2 per cent. Christians, and 16,254 Jains.

The majority of the population are Marāthās (327,000 Marāthās and 17,000 Marāthā Kunbīs), who are generally cultivators and artificers, and, as a rule, darker in complexion than the Brāhmans. Besides the low or depressed castes—Mahār (65,000), Māng (21,000), Dhangar (40,000), and Chamār (15,000)—there are many wandering tribes, of which the chief are called Vanjāri (32,000), Kaikādi, and Kolhāti. Of hill tribes, besides the Bhīls (14,000), the Thākurs (7,000) and Castes and occupations.

Kāthodis (125) may be mentioned; they form a distinct race, generally met with in the wilder tracts in the west of the District. The members of these tribes are still fond of an unsettled life, and have to be carefully watched to prevent their resuming their predatory habits. Others of numerical importance are Brāhmans, mostly Deshāsths (33,000), Kolīs (30,000), and Mālīs or gardeners (36,000). With the exception of a few Bohrās, who engage in trade and are well-to-do, the Musalmāns are in poor circumstances, being for the most part sunk in debt. They are chiefly Shaikhs (29,000). The Muhammadan priest or Mullā, besides attending the mosque, kills the sheep and goats offered by the Hindus as sacrifices to their gods. So thoroughly has this strange custom been incorporated with the village community, that Marāthās generally decline to eat the flesh of a sheep or goat unless its throat has been cut by a Mullā or other competent Musalmān. Since the District came under British management, there has been a large immigration of Mārwāris. These men come by the route of Indore and Khāndesh, and are almost entirely engaged in money-lending and trading in cloth and grain. Agriculture supports 60 per cent. of the population, while industry and commerce support 18 and 1 per cent. respectively.

Christian missions.

In 1901 there were 20,000 native Christians, of whom 7,000 were Anglicans, 4,000 Roman Catholics, 8,000 belonged to minor denominations, and 1,000 were unspecified. They belong to the American Marāthī Mission, the Society for the Propagation of the Gospel, and the Roman Catholic Mission. The American Mission commenced work in 1831, and was followed by the S.P.G. in 1873. At present the Ahmadnagar missions have three churches and numerous schools. The American Mission maintains a carpet factory and two experimental weaving institutions, and the hands trained by this mission are employed in a factory maintained by the Indian Mission Aid Society.

General agricultural conditions.

The chief soils are *kālī* (black), *tāmbat* (red), and *barad* (grey), including *pāndhari* (white). Towards the north and east the soil is, as a rule, a rich black loam, while in the hilly part towards the west it is frequently light and sandy. By reason of this variation in soil, it is said that a cultivator with 10 acres of land in the north of the District is better off than one with a holding twice as large in the south. Though a single pair of bullocks cannot till enough land to support a family, many cultivators have only one pair, and manage to get their fields ploughed by borrowing and lending bullocks to

one another. Garden lands are manured; but, as a rule, for ordinary 'dry crops' nothing is done to enrich the soil. Cultivators are employed in ploughing in March, April, and May; in sowing the early *kharīf* crops in July; and in harvesting the early crops from November to February.

The District is almost entirely *ryotwāri*, only about 13 per cent. of the total area being held as *inām* or *jāgīr*. The chief statistics of cultivation in 1903-4 are shown below, in square miles:— Chief agricultural statistics and principal crops.

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.	Forest.
Kopargaon	519	464	3	1	14
Akola	572	344	2	5	175
Sangamner	704	458	10	20	136
Rāhuri	500	364	8	8	76
Nevāsa	621	522	2	8	31
Shevgaon	678	559	7	12	42
Pārner	729	512	14	11	102
Ahmadnagar	624	469	16	8	63
Jāmkhed	465	329	11	2	63
Shrīgonda	617	454	13	3	69
Karjat	565	396	12	7	78
Total	6,598*	4,871	98	85	849

* Of this area, which is based on the most recent information, statistics are not available for 139 square miles.

The staple food-grains grown are *jowār* (1,064 square miles) and *bājra* (1,556). The excess of *bājra* over *jowār* is due to abnormal seasons during the last few years. Usually the area under the former is smaller. Wheat (309) and gram (123) are grown in the vicinity of the Godāvari and Bhīma rivers. In the Akola *tāluka*, where the soils are suited to the cultivation of coarser cereals, *vari* and *rāgi* are cultivated. The pulses are *tur* (105), *math* (103), and *kulith* (115). In the east, cotton (225) is cultivated, and hemp or *san* (40) in some of the superior soils near the Godāvari. Safflower covers 170 square miles, and sesamum and linseed 57 and 50 square miles respectively. Among other products, sugar-cane to a small extent, tobacco, *pān*, and vegetables of many kinds are raised in irrigated lands.

Cotton was first introduced by a Hindu merchant of Ahmadnagar in 1830. It prospered and is now largely grown in the east. The ryots have availed themselves extensively of the Land Improvement Loans Act, and more than 39 lakhs was advanced during the ten years ending 1904, including 25 lakhs under the Agriculturists' Loans Act. Of this sum, 8 lakhs was Improvements in agricultural practice.

advanced during the famine of 1896–7, and 27·7 lakhs during the four years ending 1902–3.

Cattle, ponies, &c.

The introduction of tongas or pony carriages during the last thirty years has interfered with the breed of fine, cream-white, straight-horned *Hunum* bullocks formerly used for riding or drawing carts. Efforts are being made by Government to revive the famous breed of Bhīmthadi horses, which was allowed to degenerate after the establishment of British supremacy in 1803 and was largely drawn upon during the Afghān War. Fourteen horse stallions, as well as five pony stallions, are stationed in the District in charge of the Army Remount department; and an annual horse show is held at Ahmadnagar, when prizes are given for good young stock and brood mares. Dhangars keep a class of specially good ponies, which are known as Dhangaris. Goats are numerous, and sheep, though fewer in number, are kept by all except the richer and higher classes.

Irrigation.

Irrigation from wells and water channels is common. Of the total cultivated area, 98 square miles, or 2 per cent., were irrigated in 1903–4. Government canals supplied 8 square miles, wells 84, and other sources 6 square miles. The Government works include the Bhātodi lake and the Ojhar and Lākh canals. The Bhātodi lake was constructed by Salābat Khān, the minister of Murtaza Nizām Shāh I (1565–88), and was restored by Government in 1871. It is 10 miles from Ahmadnagar and supplies 719 acres of land, the estimated area which it could irrigate in a good year being 1,500 acres. When full it has an area of 315 acres, with an available capacity of 154 millions of cubic feet. The Ojhar canal, with head-works in Sangamner, is 27 miles long, irrigating an area of about 7,400 acres. It was commenced as a relief measure in 1869 and completed in 1879. The Lākh canal, with head-works in the Rāhuri *tāluka*, is 23 miles long and supplies 186 acres. It was completed in 1873–4. Both the canals draw their supply from the Pravara river. The capital outlay up to 1903–4 on the Lākh, Ojhar, and Bhātodi works exceeded 10 lakhs. There are two irrigation works for which only revenue accounts are kept. Nearly 30,000 wells are used for irrigation, chiefly to water small patches of garden crops.

Forests.

The area of forest land in Ahmadnagar is 849 square miles, of which 458 square miles are under the control of the Forest department. Nearly 40 per cent. of the forest area is in the Akola and Sangamner *tālukas*. The total revenue is about Rs. 25,000. The commonest tree in the plains is the *babūl*;

bor, *nīm*, *tivas*, *karanj*, *saundad*, and *hiver* are also found. Hill forests belong to three classes: the lower slopes, the central teak region, and the evergreen western forests. The lower slopes are bare and yellow, broken only by *rui*, *hekle*, and other scrub. The central region possesses teak of excellent quality. It is treated as coppice, the demand being chiefly for poles and rafters. Under the teak, *dhāvdā*, *khair*, and some other kinds of underwood are encouraged. The characteristic trees of the western forests are *anjan*, *jāmbul*, *beheda*, *ain*, and *karvand*.

Limestone is found in abundance throughout the District, and also trap suitable for building purposes. A variety of compact blue basalt is worked near Ahmadnagar. Veins of quartz and chalcedony, agate and crystals occur in the Shrīgonda *tāluka*, and stones resembling carnelian are procurable in the rocky plain which lies westward of Ahmadnagar. Minerals.

The chief industries are the weaving of *sārīs* or women's robes and inferior turbans, and the manufacture of copper and brass pots. Weaving is said to have been introduced into the District soon after the founding of the city of Ahmadnagar (1494) by a member of the Bhāngria family, a man of considerable means and a weaver by caste. Of late years the industry has somewhat declined. This change seems due to the competition of European and machine-made goods. The yarn consumed in the looms comes chiefly from Bombay, being either imported from Europe or spun in the Bombay mills. Ahmadnagar *sārīs* have a high reputation; and dealers still journey from neighbouring Districts and from the Nizām's Dominions to purchase them. Many of the weavers are entirely in the hands of money-lenders, who advance the raw material and take possession of the article when made up. An ordinary worker will earn when at his loom about Rs. 5 a month. The weavers, as a class, are said to be addicted to the use of intoxicating liquors. In 1820 this craft was almost entirely confined to members of the weaver caste, Sālī or Koshtī. But many classes, such as Brāhmans, Kunbīs, Kongādīs, and Mālīs, now engage in the work. Among hand industries formerly of importance are the manufactures of paper and carpets. Country paper has been supplanted by cheaper articles brought from China and Europe, and Ahmadnagar carpets have ceased to be manufactured except in a recently established factory. There are five cotton-pressing factories, of which three are working and employ about 200 persons. Arts and manufactures.

In former days a considerable trade between Upper India Commerce.

and the sea-board passed through this District. The carriers were a class of Vanjāras called Lamāns, owners of herds of bullocks. But since the opening of the two lines of the Great Indian Peninsula Railway, the course of traffic has changed. Trade is carried on almost entirely by means of permanent markets. From all parts of the District millet and gram are exported to Poona and Bombay. The imports consist chiefly of English piece-goods, tin-sheets, metals, groceries, salt, yarn, and silk. Except three or four mercantile houses in Ahmadnagar city, there are no large banking establishments in the District. The business of money-lending is chiefly in the hands of Mārwāri Baniās, most of them Jains by religion, who are said to have followed the Muhammadan armies at the end of the fifteenth century. They did not, however, commence to settle in the District in large numbers until the accession of the British in the first quarter of the last century. Since then they have almost supplanted the indigenous money-lenders, the Deccan Brāhmans.

Communications. Railways and roads. The Dhond-Manmād State Railway, connecting the south-eastern and north-eastern branches of the Great Indian Peninsula Railway at the stations named, runs for a distance of 122½ miles (very nearly its entire length) through this District, passing through Ahmadnagar city. Some cotton traffic has been diverted by the construction of the Nizām's Hyderābād-Godāvari Valley Railway from Manmād to Hyderābād. The District is well supplied with roads, the chief leading from Ahmadnagar to Poona, Dhond, Malegaon, and Paithan, while good roads also run to Akola, Jāmkhed, and Shevgaon. Of a total length of 758 miles of road within its limits, 398 miles are bridged and metalled and 360 miles are unmetalled. Avenues of trees are maintained on 13 miles.

Famine. The District is liable to drought, and numerous famines are recorded in its history. The first is the awful calamity at the close of the fourteenth century, known as Durgā-devī, which commenced about 1396 and lasted nearly twelve years. In 1460 a failure of rain caused what is known in history as Dāmājī Pant's famine. In 1520 no crops were grown, and the failure of rain caused famine in 1629–30. In 1791, 1792, and 1794 there was much misery owing to the increase in the price of grain, occasioned by the disturbed state of the country. A few years later (1803–4) the depredations of the Pindāris who accompanied Holkar's army inflicted much suffering, and so severe was the distress that children are said to have been sold for food. The price of wheat rose to Rs. 2 a pound.

Besides scarcity due to the droughts of 1824, 1833, 1846, and 1862, severe famines occurred in 1877, 1897, and 1899–1900. In 1877 an unusually large number of the famine-stricken emigrated to the Nizām's Dominions and Khāndesh. The Dhond-Manmād Railway was the principal relief work opened, but it attracted only those whose homes were near. After twenty years the District again suffered from famine, owing to the failure of the autumn rains of 1896. Relief works were opened in November, and the numbers mounted rapidly, till in September, 1897, there were 86,745 persons on the works, and 23,184 persons in receipt of gratuitous relief. The following rains were again indifferent, and distress lingered in the District for some years. In 1899 the monsoon opened well, but the long droughts of July, August, October, and November ruined the crops. At the height of this famine there were nearly 241,000 persons on works and 29,000 in receipt of gratuitous relief. The famine continued into the next year on account of the small out-turn of the harvest, which averaged about one-fourth of the normal for the whole District. It is calculated that the excess of mortality over the normal was 28,400, and that 162,000 cattle died. Exclusive of advances to agriculturists and remissions, the famine cost more than a crore. Remissions of land revenue and *takāvi* advances amounted to nearly 30 lakhs.

District subdivisions and staff.

For administrative purposes the District is divided into eleven *tālukas*: namely, AHMADNAGAR, PĀRNER, SHRĪGONDA, KARJAT, JĀMKHED, SHEVGAON, NEVĀSA, RĀHURI, KOPARGAON, SANGAMNER, and AKOLA. The Collector has two covenanted Assistants and one Deputy-Collector recruited in India.

Civil and criminal justice.

The District and Sessions Judge is assisted by one Subordinate Judge under the Dekkhan Agriculturists' Relief Act, and seven other Subordinate Judges for civil business. There are altogether forty-one courts in the District to administer criminal justice. The commonest forms of crime are murder, dacoity, robbery, and theft.

Land revenue administration.

The earliest revenue system of which traces remained at the beginning of British rule is the division of the land into plots or estates known as *munds*, *kās*, and *tikās* or *thikās*. These names seem to be of Dravidian, that is, of south-eastern, origin. They need not date from times farther back than the northern element in Marāthī, as, among the great Hindu dynasties who ruled the Deccan before the Musalmān invasion in 1294, the Rāshtrakūtas (760–973), the Chālukyas (973–1184), and perhaps the Deogiri Yādavas (1150–1310) were

possibly of southern or eastern origin. The *mund* or large estate was the aggregate of many fields or *tikās*, together or separate, or part together, part separate. The assessment on the *mund* was a fixed lump sum for all the lands in the estate or *mund*, good, fair, and bad. In the settlement of *kās* or small estates the division of the village lands was into smaller parcels than *munds*, and, unlike the assessment on *tikās* or *shets*, the assessment on each *kās* in a village was the same. The next system of revenue management was Malik Ambar's (1600–26). This combined the two great merits of a moderate and certain tax and the possession by the cultivators of an interest in the soil. Instead of keeping the state sole landowner, he sought to strengthen the government by giving the people a definite interest in the soil they tilled. He made a considerable portion of the land private property. The revenue system which the English found in force when they conquered Ahmadnagar arose in the latter part of the seventeenth century. It was based upon the usual Marāthā claim to the *chauth* or one-fourth of the revenue, but was greatly complicated by continual assignments of revenue to chiefs, and by the grant to many proprietors of the right to hold and collect the rents of many estates in the District. Uncertainty as to the amount of revenue due, and as to the persons to whom it was payable, caused great hardship to the people. Nāna Farnavīs endeavoured to ameliorate their condition by the introduction about 1769 of an alternative system, known as *kamāl*, based upon the estimated value of the soil and the highest rent it could bear consistent with the prosperity of the country; but this system proved unworkable and gave place to an older system, the *kāsbandi bīgha*, which with modifications existed up to the date of British rule, and for some years after that date. A series of bad harvests and other causes prevented the British taking any steps towards the settlement of the revenues till 1848.

The first settlement took place between 1848 and 1876. Resettlement operations were commenced in 1875, and completed throughout the District by 1890. The revision in nine *tālukas* disclosed an increase in the cultivated area of 5 per cent., and enhanced the assessment from 9 to 15 lakhs. The average assessment on 'dry' land is R. 0–9; on rice land, Rs. 1–9; and on garden land, Rs. 1–8.

Collections of land revenue and of total revenue are shown in the table on the next page, in thousands of rupees.

Local affairs are managed by five municipalities—namely,

AHMADNAGAR, BHINGĀR, SANGAMNER, VĀMBORI, and KHARDA —and by a District board with eleven *tāluka* boards. The annual receipts of the municipalities average about 1½ lakhs. The District and local boards have an average income of nearly 2 lakhs, the principal source being the land cess. About Rs. 70,000 is spent annually on the maintenance and construction of roads and buildings. Municipalities and local boards.

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . . .	15,41	19,20	11,75	21,10
Total revenue . . .	18,92	24,21	15,98	27,09

Police and jails. The District Superintendent of police at Ahmadnagar is assisted by two inspectors. There are 16 police stations in the District. The total number of police is 772: namely, 13 chief constables, 157 head constables, and 602 constables. The mounted police number 9, under one *daffadār*. In addition to the District jail at Ahmadnagar with accommodation for 1,200 prisoners, there are 11 subsidiary jails in the District which can accommodate 266 prisoners. The daily average number of prisoners during 1904 in all the jails was 858, of whom 5 were females.

Education. The District holds a medium position as regards the education of its population, of whom 4·7 per cent. (8·9 males and 0·4 females) were literate in 1901. In 1881 there were 219 schools, attended by 11,140 pupils. The number of pupils rose to 19,698 in 1891, and to 20,135 in 1901. In 1903–4 there were 412 schools in the District (including 24 private schools), of which 3 were high schools, 4 middle, and 378 primary. These schools were attended by 14,884 pupils, of whom 2,781 were girls. Of the 388 institutions classed as public, 197 schools were supported by local boards, 20 by municipalities, 120 were aided and 51 unaided. A training school for masters and two industrial schools are located at Ahmadnagar. The total expenditure on education in 1903–4 was 1·8 lakhs, of which 72 per cent. was devoted to primary education. Towards this, local boards and municipalities contributed respectively Rs. 23,000 and Rs. 10,000, while Rs. 14,000 represented fee-receipts.

Hospitals and dispensaries. Besides the civil hospital at Ahmadnagar, there are nine dispensaries and one private medical institution in the District, with accommodation for 97 in-patients. In 1904 the total number of cases treated was 57,989, of whom 652 were in-patients, and 1,744 operations were performed. The total

expenditure on medical relief was Rs. 17,219, of which Rs. 10,024 was derived from Local and municipal funds.

Vaccination. The number of persons successfully vaccinated in 1903-4 was 23,354, representing a proportion of 28 per 1,000, which exceeds the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. xvii (1884); *Selections from the Records of the Bombay Government*, No. CXXIII; *Revision Settlement Report* (1871).]

Kopargaon.—*Tāluka* of Ahmadnagar District, Bombay, lying between 19° 35′ and 19° 59′ N. and 74° 15′ and 74° 45′ E., with an area of 519 square miles. It contains one town, PUNTĀMBA (population, 5,890), and 122 villages. The head-quarters are at Kopargaon. The population in 1901 was 73,539, compared with 89,339 in 1891. The decrease is attributed to famine and consequent migration. The density, 142 persons per square mile, is slightly above the District average. The demand for land revenue in 1903-4 was 2·4 lakhs, and for cesses Rs. 14,000. The Godāvari river enters at the extreme north-west corner, traverses the *tāluka*, and forms for a short distance the eastern boundary. The bed of the river is considerably below the general level of the country, and the high black-soil and clay banks are deeply fissured by numerous minor streams. Kopargaon consists of a black-soil plain, having a gentle slope from both sides towards the Godāvari. In most of the villages the people are dependent on wells for their water-supply, as all but the largest tributaries of the Godāvari run dry shortly after the monsoon rains have ceased. The cultivators are in an impoverished condition, attributable in a great measure to the frequent occurrence of bad seasons. Sudden and violent showers, which deluge the country, are often succeeded by a long and continued drought.

Akola Tāluka.—*Tāluka* of Ahmadnagar District, Bombay, lying between 19° 16′ and 19° 45′ N. and 73° 37′ and 74° 7′ E., with an area of 572 square miles. It contains 157 villages, the head-quarters being at Akola. The population in 1901 was 70,566, compared with 68,009 in 1891. The density, 123 persons per square mile, is slightly below the District average. The demand for land revenue in 1903-4 was 1 lakh, and for cesses Rs. 7,000. Akola consists mainly of the two valleys of the Pravara and Mulā rivers, with the smaller valley of the Adula in the extreme north. The general character of the valleys is very wild and rugged; but that of the Pravara, at a little distance from Rājur village,

exchanges its rocks and ravines for the flat alluvial plain, known as the *desh* of Akola, into which the Adula also breaks after a fall of 200 feet. The western half of the *tāluka*, which includes the crest of the Western Ghāts, enjoys a very heavy rainfall, averaging from 200 to 250 inches on its borders, whereas the *desh* or eastern portion rarely obtains more than 22 inches in the year.

Sangamner Tāluka.—*Tāluka* of Ahmadnagar District, Bombay, lying between 19° 12′ and 19° 47′ N. and 74° 1′ and 74° 31′ E., with an area of 704 square miles. It contains one town, SANGAMNER (population, 13,801), the head-quarters; and 151 villages. The population in 1901 was 90,381, compared with 82,936 in 1891. The presence of 5,000 immigrants on relief works mainly accounts for the increase. The density, 128 persons per square mile, is almost equal to the District average. The demand for land revenue in 1903–4 was 1·7 lakhs, and for cesses Rs. 11,000. The *tāluka* is divided into three distinct portions by the two mountain ranges which traverse it in a parallel direction. The chief rivers are the Pravara and the Mulā. The Pravara flows in the valley between the two mountain ranges. With the exception of irrigation from the Ojhar canal, garden cultivation is carried on chiefly by means of wells.

Rāhuri Tāluka.—Central *tāluka* of Ahmadnagar District, Bombay, lying between 19° 15′ and 19° 37′ N. and 74° 23′ and 74° 51′ E., with an area of 501 square miles. It contains one town, VĀMBORI (population, 6,191), and 112 villages, including RĀHURI (5,681), the head-quarters. The population in 1901 was 83,494, compared with 64,862 in 1891. The increase was due to the large numbers (19,000) employed in 1901 upon relief works opened during famine. This raised the density to 167 persons per square mile, which is, with the exception of Ahmadnagar *tāluka*, the highest in the District. The demand for land revenue in 1903–4 was 1·8 lakhs, and for cesses Rs. 12,000. Rāhuri forms part of an extensive plain country drained by the Mulā and Pravara rivers, tributaries of the Godāvari. The south-eastern boundary is a well-marked range of hills dividing Rāhuri from the more elevated *tāluka* of Ahmadnagar, which forms the watershed between the Godāvari and the Bhīma. The highest point, the hill of Gorakhnāth, has an elevation of 2,982 feet above sea-level, or about 1,200 feet above the level of Rāhuri. The *tāluka* is scantily wooded, and, with the exception of a few mango and tamarind groves on the banks of rivers near villages, is entirely bare of

trees. The prevailing soil is a deep black, requiring much rain to enable it to yield good crops. Towards the hills and on the ridges between the rivers, the soils, being lighter and more friable, are better adapted for the early crops. Four miles of the Ojhar canal and 17 miles of the Lākh canal traverse the *tāluka*. Early and late crops are grown in about equal proportions: the early crops chiefly in the hill villages, and the late crops in the plains. The Dhond-Manmād chord railway traverses the *tāluka* from north to south.

Nevāsa.—*Tāluka* of Ahmadnagar District, Bombay, lying between 19° 14′ and 19° 43′ N. and 74° 41′ and 75° 13′ E., with an area of 621 square miles. It contains 147 villages, including SONAI (population, 5,393). The head-quarters are at Nevāsa. The population in 1901 was 65,503, compared with 88,149 in 1891. The decrease was due to famine and migration to relief works. The people also availed themselves of the demand for labour created by a good harvest in the Nizām's Dominions. The density, 105 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was 1·7 lakhs, and for cesses Rs. 14,000. The general character of Nevāsa is a flat plain, sloping gently northwards towards the Godāvari river. In the south and south-east the country has a more decided slope upwards to the Nagar range of hills and is deeply fissured by ravines, down which, during heavy rains, the water rushes with great violence. The drainage is wholly towards the Godāvari, which forms the boundary of the *tāluka* on the north. One village belonging to the Nizām lies south of the river, thus breaking the continuous boundary for 3 miles. The area under *rabi* or late crops is double that under *kharīf* or early crops. The area of irrigated land is small.

Shevgaon.—Easternmost *tāluka* of Ahmadnagar District, Bombay, lying between 19° 1′ and 19° 33′ N. and 74° 58′ and 75° 32′ E., with an area of 678 square miles. It contains one town, PĀTHARDI (population, 6,299), and 179 villages. The head-quarters are at Shevgaon. The population in 1901 was 92,384, compared with 100,373 in 1891. The decrease is attributable mainly to emigration to relief works in other *tālukas* and to the Nizām's Dominions, consequent upon famine conditions. The density, 136 persons per square mile, is slightly above the District average. The demand for land revenue in 1903–4 was 2 lakhs, and for cesses Rs. 15,000. Shevgaon lies in the valley of the Godāvari. The average annual rainfall, over 26 inches, is higher than in other *tālukas*.

With one or two exceptions, the streams which drain the tract all rise in the hills on the south and south-east, and flow northward into the Godāvari. The villages are for the most part well supplied with water, which throughout the low grounds is always to be found at a moderate depth. Near the Godāvari the soil is deep and stiff, but near the hills it is of a lighter composition and more easily worked. Early and late crops are grown in about equal proportions. The principal manufacture is coarse cotton cloth of various kinds.

Pārner Tāluka.—*Tāluka* in Ahmadnagar District, Bombay, lying between 18° 50′ and 19° 21′ N. and 74° 11′ and 74° 44′ E., with an area of 727 square miles. It contains 117 villages, including PĀRNER (population, 5,300), the head-quarters. The population in 1901 was 72,617, compared with 79,093 in 1891. The density, 100 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was 1·3 lakhs, and for cesses Rs. 10,000. The surface of Pārner is very irregular and hilly, consisting of a series of plateaux of various heights. The highest is the Kānhur or central plateau, formed by the widening out of the summit of one of the spurs of the Western Ghāts, which traverses the *tāluka* from north-west to south-east. The average height of the central plateau is about 2,800 feet above sea-level, though some points on it are 300 feet higher. On the whole, the water-supply is fairly good. Many of the smaller streams have a perennial flow.

Ahmadnagar Tāluka.—*Tāluka* of Ahmadnagar District, Bombay, lying between 18° 47′ and 19° 19′ N. and 74° 32′ and 75° 2′ E., with an area of 624 square miles. There are two towns, AHMADNAGAR (population, 35,784), the District and *tāluka* head-quarters, and BHINGAR (5,722); and 117 villages, including JEŪR (5,005). The population in 1901 was 128,094, compared with 124,300 in 1891. The density, 205 persons per square mile, is the highest in the District. The demand for land revenue in 1903–4 was 1·7 lakhs, and for cesses Rs. 13,500. The *tāluka* is for the most part a high table-land, lying between the Godāvari and the Bhīma. The northern and eastern sides of the table-land are lofty and precipitous, but on the west and south the country is less broken. From the head of the table-land the Sīna flows in a south-easterly direction towards its junction with the Bhīma. The *tāluka* is very scantily wooded, and the soil is generally poor, save in a few of the minor valleys where rich reddish soil occurs. The climate is healthy, notwithstanding the moderate rainfall,

which averages about 22 inches a year; but it is on the whole less favourable than that of Shevgaon on the east.

Jāmkhed.—*Tāluka* of Ahmadnagar District, Bombay, in the south-east corner of the District, surrounded by the Nizām's Dominions. The largest compact portion lies between 18° 33′ and 18° 52′ N. and 75° 11′ and 75° 35′ E. The area is 460 square miles; and the *tāluka* contains one town, KHARDA (population, 5,930), and 75 villages. The head-quarters are at Jāmkhed. The population in 1901 was 64,258, compared with 76,208 in 1891, the decrease being due to famine. The density, 140 persons per square mile, is above the District average. The demand for land revenue in 1903-4 was one lakh, and for cesses Rs. 7,000. Most of the villages are situated in the valley of the Sīna, and a few on the Bālāghāt, an elevated and bare table-land, which gradually subsides eastward to the general level of the Deccan and is watered by a tributary of the Godāvari. Several streams rise in the small spurs which jut from the Bālāghāt range, the most notable being the Inchāna, which falls in a fine cascade, 219 feet high, through a ravine to the north-east of Jāmkhed village. Whereas the soil of the Sīna valley is deep and difficult to work, that of the Bālāghāt is of lighter texture and repays cultivation, while the country lying between this range and the boundary of Shevgaon is extremely fertile and well watered, except in the vicinity of the Sīna river, where the rainfall is uncertain. The climate of Jāmkhed is healthy, and the annual rainfall averages about 26 inches.

Shrīgonda Tāluka.—Southern *tāluka* of Ahmadnagar District, Bombay, lying between 18° 27′ and 18° 54′ N. and 74° 23′ and 74° 56′ E., with an area of 615 square miles. It contains one town, SHRĪGONDA (population, 5,415), the head-quarters; and 83 villages. The population in 1901 was 61,240, compared with 66,658 in 1891. The density, 100 persons per square mile, is much below the District average. The demand for land revenue in 1903-4 was 1·4 lakhs, and for cesses Rs. 10,000. The greater part of the *tāluka* lies in the valley of the Bhīma, and has a gentle slope from the north-east towards that river on the south and its tributary the Ghod on the south-west. For the most part it is a level plain, with an average elevation of 1,900 feet above sea-level, skirted on the north-east by a chain of low hills with flat summits, or *pathārs*, which have a uniform elevation of about 2,500 feet. Towards the hills the soil is generally of a very poor description. That of the centre of the *tāluka* is tolerably fertile; but in the

neighbourhood of the Bhīma deep clayey soils prevail which require much labour in their cultivation, and yield good crops only in years of plentiful rainfall. The old trunk road from Ahmadnagar enters the *tāluka* on the north at the fifteenth mile from Ahmadnagar city and runs south. The Dhond-Manmād Railway completely traverses the *tāluka* from north to south.

Karjat.—Southern *tāluka* of Ahmadnagar District, Bombay, lying between 18° 20′ and 18° 50′ N. and 74° 43′ and 75° 13′ E., with an area of 565 square miles. It contains 81 villages, including Karjat, the head-quarters. The population in 1901 was 35,619, compared with 48,828 in 1891. The decrease, which is greater than in any other *tāluka*, is primarily due to emigration to the Nizām's Dominions and other regions, consequent upon famine. It is the most thinly populated in the District, with a density of only 63 persons per square mile. The demand for land revenue in 1903–4 was Rs. 80,000, and for cesses Rs. 6,000. A chain of low hills with flat summits traverses the *tāluka* from north-west to south-east, dividing it into two equal parts. The streams from the eastern slope flow into the Sīna river, and from the western into the Bhīma. The country presents a dismal appearance, owing to the large proportion of rocky and unprofitable ground, almost destitute of vegetation. There are a few level tracts, some of considerable extent, where the soil is deep and rich. In the neighbourhood of the hills the soil is of the poorest description. The rainfall is extremely uncertain, and good harvests are rare. Karjat suffered severely in the famines of 1876–7 and 1899–1901, when many villages were deserted. The cultivators, owing to a succession of bad harvests, are nearly all in debt.

Ahmadnagar City.—Head-quarters of the District of the same name in the Bombay Presidency, situated in 19° 5′ N. and 74° 55′ E. It lies in a plain on the left bank of the Sīna, 72 miles from Poona, and on the Dhond-Manmād Railway. The area slightly exceeds 2 square miles. Population, (1872) 37,240, (1881) 37,492, (1891) 41,689, and (1901) 42,032, including 6,348 in the cantonment. Hindus number 31,030; Muhammadans, 5,968; and Christians, 3,572. Some of the Brāhmans are traders; most, however, are employed in work requiring education. The Musalmāns are, as a rule, uneducated and indolent. They are employed in weaving, cleaning cotton, and in domestic service in the houses of well-to-do Hindus. The Mārwāris are the most prosperous class. The city has a commonplace appearance, most of the houses being

of the ordinary Deccan type, built of mud-coloured sun-burnt bricks, with flat roofs. It is surrounded by an earthen wall about 12 feet in height, with decayed bastions and gates. This wall is said to have been built about 1562 by Husain Nizām Shāh. The adjacent country is enclosed on two sides by hills.

History. Ahmadnagar was founded about 1490 by Ahmad Nizām Shāh, after whom it is named. Originally an officer of the Bahmani kingdom, he, on the breaking up of that government, assumed the title and authority of an independent ruler, and fixed his capital here. In his reign the kingdom attained high prosperity, extending on the north over Daulatābād and part of Khāndesh. He was succeeded in 1508 by his son, Burhān Nizām Shāh, who died in 1553 and was succeeded by his son, Husain Nizām Shāh. This prince suffered a very severe defeat from the king of Bijāpur, in 1562, losing several hundred elephants and 660 pieces of cannon: among them the great gun now at Bijāpur, considered to be one of the largest pieces of bronze ordnance in the world. Husain Shāh of Ahmadnagar subsequently allied with the kings of Bijāpur, Golconda, and Bīdar against Rājā Rām of Vijayanagar, whom in 1565 they defeated, made prisoner, and put to death. Murtaza Nizām Shāh, nicknamed Divānā, or 'the Madman,' from the extravagance of his conduct, was in 1588 cruelly murdered by his son, Mīrān Husain Nizām Shāh, who, having reigned ten months, was in turn deposed and put to death. Mīrān was succeeded by his cousin, Ismail Nizām Shāh; but he, after a reign of two years, was deposed by his own father, who became king with the title of Burhān Nizām Shāh II, and died in 1594. His son and successor, Ibrāhīm Nizām Shāh, after a reign of four months, was killed in battle against the king of Bijāpur. Ahmad, a reputed relative, was raised to the throne. But, as it was soon afterwards ascertained that he was not a lineal descendant, he was expelled from the city; and Bahādur Shāh, the infant son of Ibrāhīm Nizām Shāh, was placed on the throne under the influence of his great-aunt Chānd Bībī (widow of Alī Adil Shāh, king of Bijāpur, and sister of Murtaza Nizām Shāh of Ahmadnagar), a woman of heroic spirit, who, when the city was besieged by Murad, the son of Akbar, in 1596, defended in person the breach in the rampart, and compelled the assailants to raise the siege. In 1600 prince Dāniyāl Mirza, son of Akbar, at the head of a Mughal army, captured the city; but nominal kings continued to exercise a feeble sway until 1635, when Shāh Jahān finally overthrew the dynasty. In 1759 the city was betrayed to the Peshwā by the commandant

holding it for the Mughals. In 1797 it was ceded by the Peshwā to the Marāthā chief, Daulat Rao Sindhia. In 1803 it was invested by a British force under General Wellesley, and surrendered after a resistance of two days. It was, however, shortly after given up to the Peshwā; but the fort was again occupied by the British in 1817, by virtue of the Treaty of Poona. On the fall of the Peshwā, Ahmadnagar became the head-quarters of the Collectorate of the same name.

Buildings.

Half a mile to the east of the city stands the fort, built of stone, circular in shape, about 1½ miles in circumference, and surrounded by a wide and deep moat. This building, which stands on the site of an earlier fortress of earth, said to have been raised in 1488, was erected in its present form by Husain Nizām Shāh, grandson of Ahmad Nizām Shāh, in 1559. In 1803 the fort was surrendered to the British after a severe bombardment. The breach then made is still visible. In 1901, during the Boer War, the fort was used for the accommodation of prisoners from South Africa. To the north-east of the flag-staff bastion is a large tamarind tree, known as 'Wellington's tree,' from the tradition that General Wellesley, as he then was, halted beneath it while his troops were besieging the fort. Natives may frequently be observed paying their devotions to it. The city has numerous specimens of Muhammadan architecture, several of the mosques being now converted into Government offices or used as dwelling-houses by European residents. The Collector's office is held in a mosque built in the sixteenth century. The Judge's court was originally the palace of a Musalmān noble, built about the year 1600. Six miles east of the city, on a hill between 700 and 800 feet above the level of the fort and on the left of the Ahmadnagar-Shevgaon road, stands the tomb of the Nizām Shāhi minister, Salābat Khān II, commonly known as Chānd Bībī's Mahal. It is an octagonal dome surrounded by a three-storeyed veranda. From the summit a fine view can be obtained of the surrounding country, and it is a favourite resort during the hot season. Other buildings of special interest are the Damri Masjid, a very ornate little building, the Faria Bāgh, the tomb of Ahmad Nizām Shāh, the Hasht Bihisht Bāgh, and Alamgīr's Dargāh. The latter, close to the adjacent town of Bhingār, is the burial-place of the heart and viscera of Aurangzeb.

Ahmadnagar is an important mission centre. Two noteworthy industrial schools are maintained by the American Mission: namely, a carpet factory and an experimental weav-

ing institute. The two schools together contain 410 pupils. There is a Pārsī fire-temple near the city and a fine cotton market. In the city are three high schools, three middle schools, and one normal class. Of these, the high schools belong to the American Mission, the Education Society, and the S.P.G. Mission, and contain respectively 247, 167, and 80 pupils. An agricultural class with eleven pupils is attached to the Education Society's school. The middle schools are St. Anne's Roman Catholic school with 34 pupils, the American Mission girls' school with 136 pupils, and the Education Society's school with 151 pupils. The normal class has an attendance of 87. The municipality, established in 1854, had an average income during the decade ending 1901 of nearly one lakh. In 1903-4 the income was Rs. 82,000, chiefly derived from octroi (Rs. 34,000), conservancy fees (Rs. 9,500), and market fees (Rs. 9,300). A civil hospital treats about 10,000 patients annually. The city is supplied with water by numerous aqueducts leading from sources 2 to 6 miles distant, supplemented by well-water pumped by machinery into the ducts. Ahmadnagar is a station of the Poona division of the Western (Southern) Command, with a garrison composed of British and Native infantry, and a field battery. During the ten years ending 1901 the cantonment fund had an average income of Rs. 14,000. In 1903-4 the income was Rs. 26,100, and the expenditure nearly Rs. 21,000.

The chief industries are the weaving of *sārīs* and the manufacture of copper and brass pots. Good carpets are woven in a mission factory, lately established. One street is devoted to the houses and shops of grain-dealers. The shops of the cloth-sellers form another street. The cloth-selling trade is chiefly in the hands of Mārwāris, who combine it with money-lending.

Belāpur.—Village in the Rāhuri *tāluka* of Ahmadnagar District, Bombay, situated in 19° 34′ N. and 74° 39′ E., 15 miles north of Rāhuri, on the Dhond-Manmād Railway. Population (1901), 4,630, including Belāpur-Khurd (1,167). It lies on the north bank of the Pravara, which in floods rises to the gates. On the river-side are some picturesque buildings belonging to the Naiks, an old Marāthā family. The chief traders are Mārwāri Vānīs and Telis. In 1822 an attempt was made to make Belāpur the centre of a revolt. Troops were to be collected here and at Nandurbār in Khāndesh, and in conjunction with the local Kolīs were to make a general attack

upon the British posts. The plot was, however, discovered and quashed.

Bhingār.—Town in the District and *tāluka* of Ahmadnagar, Bombay, situated in 19° 6′ N. and 74° 45′ E., adjoining the cantonment of Ahmadnagar. Population (1901), 5,722, including a hamlet of 697. Bhingār has a considerable weaving industry, a large proportion of the inhabitants being skilled weavers. The municipality, founded in 1857, had an average revenue during the decade ending 1901 of Rs. 5,500. In 1903–4 the income was Rs. 8,500, including a loan of Rs. 2,500 from Government.

Harischandragarh.—Fort in the Akola *tāluka* of Ahmadnagar District, Bombay, situated in 19° 23′ N. and 73° 46′ E., 19 miles south-west of Akola, and one of the most interesting points on the Western Ghāts; 4,691 feet above sea-level. The fort and the temples on the summit are annually visited by numerous pilgrims on the occasion of the festival called Mahā Sivarātri. The ascent from the Poona side is very arduous. The visitors bathe in a masonry reservoir near the temples, apparently of Hemādpanti origin, and a fair is held in the vicinity. On a peak half a mile east of the summit is the citadel, with decaying walls and ruined cistern. There are five caves below the fort, apparently dating from the tenth or eleventh century. From the level plain on the top of the hill the cliff drops 2,000 feet sheer to the Konkan, to which access was formerly gained by rope and pulley. In the last Marāthā War Harischandragarh was taken in May, 1818, by Captain Sykes.

Jeūr.—Market town in the District and *tāluka* of Ahmadnagar, Bombay, situated in 19° 18′ N. and 74° 48′ E., about 13 miles north-east of Ahmadnagar, on the Toka road. Population (1901), 5,005. The town is enclosed by a ruined wall and has a strong gateway with a paved entrance. Close by, perched on a high hill, is a group of three temples, one of them with an inscription dated 1781. Two miles north of Jeūr, at the top of a beautiful ravine, down which winds the Nevāsa road, is the Imāmpur travellers' bungalow. The bungalow is an old mosque and stands in a large grove with excellent shade.

Kalsūbai.—Hill in Ahmadnagar District, Bombay, situated in 19° 36′ N. and 73° 42′ E., 5,427 feet high, and the most elevated point in the Deccan. Its summit is crowned by a temple, 10 miles south-east of Igatpuri, a station on the north-east branch of the Great Indian Peninsula Railway. A

priest of Devī Kalsū daily climbs to the temple from Indor, a village at the foot of the hill, to offer a sacrifice of fowls. The shrine is visited by large numbers of Kolīs.

Kharda.—Town in the Jāmkhed *tāluka* of Ahmadnagar District, Bombay, situated in 18° 38′ N. and 75° 29′ E., 56 miles south-east of Ahmadnagar city. Population (1901), 5,930, including a hamlet of 798. In 1795 an engagement took place near here between the Marāthās and the Nizām. The latter, being defeated, retreated to the fort of Kharda, where he was completely hemmed in, and constrained to accede to an ignominious treaty. The town contains upwards of 500 substantial merchants, shopkeepers, and money-lenders, many of whom carry on a large trade in grain, country cloth, and other articles. Kharda belonged to the Nimbālkar, one of the Nizām's Marāthā nobles, whose handsome mansion in the middle of the town is now in ruins. In 1745 the Nimbālkar built a fort to the south-east of the town. The fort is square, in good repair, being built with cut stone walls 25 or 30 feet high, and is surrounded by a ditch, now in ruins. The walls have a massive gateway, and two gates at right angles to each other. The cattle market on Tuesday is the largest in the District. The municipality, which was constituted in 1890, had an average income during the decade ending 1901 of Rs. 2,400. In 1903–4 the income was also Rs. 2,400.

Madhi.—Place of pilgrimage in the Shevgaon *tāluka* of Ahmadnagar District, Bombay, situated in 19° 9′ N. and 75° 16′ E., 16 miles south-west of Shevgaon and 3 miles south-west of Pāthardi, with a shrine or *dargāh* of a Musalmān-Hindu saint, Shāh Ramzān Mahi Savār or Kānhoba. Population (1901), 844. The shrine is held in great reverence by both Hindus and Musalmāns, and the chief buildings, which are on a small hill, were built by Hindu kings and chiefs. Two domed buildings, where the ancestors of the present Ināmdār and Mujāvar are buried, were built in 1730 by Pilājī Gaikwār, whose name and that of his minister Chimnājī Sāvant are engraved in front of the shrine. On the south-east corner is a domed building called the Bāradarī, with open windows looking down on the village of Madhi below. This was built in 1731 by Rājā Sāhū (1708–49), the grandson of Sivajī, in fulfilment of a vow taken by his mother. Close to Sāhū's building, and almost at the entrance of the *dargāh*, is a lofty drum-house or *nagarkhāna*, with a flat roof reached by a narrow staircase and commanding a very wide view. This handsome building was raised about 1780 by Kānhojī Naik, a landed

proprietor of Basim in the Nizām's Dominions. There are two resthouses for pilgrims built by Salābat Khān II, the famous minister of the fourth Nizām Shāhi king, Murtaza Nizām Shāh (1565–88). The enclosure of the *dargāh* has two handsome gates, one built by More, a Marāthā chief at the Peshwā's court, and the other about 1750 by Khwāja Sharīf, a rich Khoja merchant of Ahmadnagar. Close to this gate is a recently repaired mosque.

Shāh Ramzān Mahi Savār, or Kānhoba as he is generally called by Hindus, is said to have come to Paithan about 1350 (A.H. 752), where he was converted to Islām by one Sadat Alī. After travelling six years he came to Madhi in 1380 (A. H. 782), and died there in 1390 (A.H. 792) at the age of ninety years. The saint is said to have exercised miraculous powers, and his Musalmān name is derived from his having crossed the Godāvari mounted on a large fish, Mahi Savār. A yearly fair is held at the shrine in the dark half or Phālgun (March–April), which is attended by twenty to thirty thousand pilgrims, both Hindus and Musalmāns.

Pārner Village.—Head-quarters of the *tāluka* of the same name in Ahmadnagar District, Bombay, situated in 19° N. and 74° 26′ E., 20 miles south-west of Ahmadnagar city and 15 miles west of Sārola station on the Dhond-Manmād Railway. Population (1901), 5,300. Pārner contains numerous money-lenders, chiefly Mārwāris, with a bad name for greed and fraud. In 1874–7 serious disturbances arose from their alleged malpractices. The villagers placed the money-lenders in a state of social outlawry, refusing to work for them, to draw water, supply necessaries, or shave them. The watchfulness of the police saved Pārner from a riot. Near the camping-place, at the meeting of two small streams, is an old temple of Sangameshwar or Trimbakeshwar. The village contains a Sub-Judge's court and a dispensary.

Pāthardi.—Town in the Shevgaon *tāluka* of Ahmadnagar District, Bombay, situated in 19° 10′ N. and 75° 11′ E., about 30 miles east of Ahmadnagar city. Population (1901), 6,299. The town lies picturesquely on the side of a steep hill which rises in the midst of a barren tract, skirted on the north and east by a range of hills running from Dongargaon into the Nizām's Dominions.

Puntāmba.—Town in the Kopargaon *tāluka* of Ahmadnagar District, Bombay, situated in 19° 46′ N. and 74° 37′ E., on the Godāvari, 12 miles south-east of Kopargaon, and on the Dhond-Manmād Railway. Population (1901), 5,890, including

a hamlet of 1,745. The traders are Mārwāris and Brāhmans. Puntāmba has fourteen modern temples, and two flights of steps or *ghāts* to the Godāvari, one built by Ahalyā Bai, the great temple-building princess of Indore (1767–95), and the other by one Shivrām Dumal. The chief temple dates from the middle of the seventeenth century and belongs to Changdev, a famous saint said to have had 1,400 disciples.

Rāhuri Village.—Head-quarters of the *tāluka* of the same name in Ahmadnagar District, Bombay, situated in 19° 23′ N. and 74° 39′ E., on the north bank of the Mulā river, 25 miles north of Ahmadnagar city, and 3 miles from a station on the Dhond-Manmād Railway. Population (1901), 5,681, including Khurd Rāhuri (203). Mārwāri traders are numerous in the place, which contains a Sub-Judge's court and a dispensary.

Sangamner Town.—Head-quarters of the *tāluka* of the same name in Ahmadnagar District, Bombay, situated in 19° 34′ N. and 74° 13′ E., 49 miles north-west of Ahmadnagar city. Population (1901), 13,801, including a hamlet of 2,790. The municipality, established in 1860, had an average income during the decade ending 1901 of Rs. 15,000. In 1903–4 the income was Rs. 12,500. The town has much trade in yarn, millet, gram, metals, groceries, salt, rice, and silk; and a number of looms are at work. It contains a Sub-Judge's court, a dispensary, and an English school.

Shrīgonda Town (also called Chamārgonda, from Govind, a pious Chamār).—Head-quarters of the *tāluka* of the same name in Ahmadnagar District, Bombay, situated in 18° 37′ N. and 74° 42′ E., 32 miles south of Ahmadnagar city. Population (1901), 5,415. It has four temples, and two mansions belonging to Mahārājā Sindhia of Gwalior.

Sonai Village.—Village in the Nevāsa *tāluka* of Ahmadnagar District, Bombay, situated in 19° 23′ N. and 74° 49′ E., about 24 miles north-by-east of Ahmadnagar city. Population (1901), 5,393. Sonai is a busy market, surrounded by a rich plain, and divided by a watercourse into the *peth* occupied by merchants and the *kasba* or agricultural quarter. It contains an American Mission church built in 1861.

Vāmbori.—Town in the Rāhuri *tāluka* of Ahmadnagar District, Bombay, situated in 19° 17′ N. and 74° 44′ E., 3 miles east of Khadamba on the railway, and 9 miles south-west of Rāhuri. Population (1901), 6,191. Vāmbori is the head-quarters of the Mārwār Vānīs, and the centre of their exchange and banking business. Some of the houses are large and well

built, but the streets are narrow, crooked, and ill aired. The town has a brisk trade in grain and salt, and a large cart-making industry. The Mārwāris have built a handsomely furnished temple of Bālājī. The municipality, constituted in 1885, had an average income during the decade ending 1901 of Rs. 4,600. In 1903-4 the income was Rs. 3,800.

Khāndesh District[1].—District in the Central Division of the Bombay Presidency, lying between 20° 16′ and 22° 2′ N. and 73° 35′ and 76° 24′ E., with an area of 10,041 square miles. It is bounded on the north by the Sātpurā Hills and the Narbadā river; on the east by Berār and the Nimār District of the Central Provinces; on the south by the Sātmāla, Chāndor, or Ajanta Hills; on the south-west by the District of Nāsik; and on the west by Baroda territory and the petty State of Sāgbāra in the Rewā Kāntha Agency.

Boundaries, configuration, and hill and river systems.

Khāndesh forms the most northerly section of the Deccan table-land. The chief natural feature is the Tāpti river, which, entering at the north-east corner of the District, flows in a westerly direction, dividing it into two unequal parts. Of these, the larger lies towards the south, and is drained by the Girnā, Bori, and Pānjhra rivers. Here is the long central plain of Khāndesh—an unbroken stretch of 150 miles, from the border of Nimār to Nandurbār, comprising an extensive area of rich alluvial soil. In this tract large and prosperous towns and villages, surrounded by mango groves and gardens, are numerous. Except when blasted by the hot winds of the dry season, the fields are clothed with a harvest of various crops. Northwards beyond the alluvial plain the land rises towards the Sātpurā Hills. In the centre and east, save for some low ranges of barren hills, the country is level, and has in general an arid, infertile appearance. Towards the north and west, the plain rises into a difficult and rugged country, thickly wooded, and inhabited by tribes of Bhīls, who chiefly live on the wild fruits of the forest and are supported by the profits of wood-cutting. The drainage of the District centres in the TĀPTI, which receives thirteen principal tributaries in its winding course of 180 miles through Khāndesh. None of the rivers is navigable, and the Tāpti flows in too

[1] In 1906 the District was divided into two new Districts called West and East Khāndesh, with head-quarters at Dhūlia and Jalgaon. The former contains 7 *tālukas* and 1 *petha*, with an area of 5,497 square miles, a population (1901) of 469,654, and a land revenue of 15·7 lakhs. The latter contains 10 *tālukas* and 3 *pethas*, with an area of 4,544 square miles, a population (1901) of 957,728, and a land revenue of 27·4 lakhs.

deep a bed to be made use of for irrigation. Its banks rise high and bare at a distance of from 240 to 400 yards across. Except for two waterfalls, one above and the other below the Bhusāwal railway bridge, the river rolls over long sandy stretches for forty miles till it meets the waters of the Vāghar. During the rainy season the Tāpti is not fordable; the only bridge across it is the railway bridge at Bhusāwal. The NARBADĀ skirts the north-west corner of the District for 45 miles. It occasionally serves to carry timber to the coast. Khāndesh District on the whole may be said to be fairly well supplied with surface water, for, besides the rivers that flow during the whole year, the channels of many of the smaller streams are seldom entirely without water. The four principal mountain ranges are: in the north, the SĀTPURĀ HILLS, dividing the valleys of the Tāpti and the Narbadā, including the peak of Panchu-Pāndu (3,000 feet) and plateau of TURANMĀL (3,300 feet), the starting-point of Khāndesh history; in the south-east, the Hatti; in the south, the SĀTMĀLA, Chāndor, or Ajanta range, separating Khāndesh from the Deccan table-land, and, speaking roughly, from the Nizām's Dominions; on the west, between Khāndesh and Gujarāt, is the northern extremity of the WESTERN GHĀTS. The Arva and Gālna hills divide Khāndesh from Nāsik.

Geology. The geology of Khāndesh has been examined only as far south as the Tāpti. The strip of varying breadth between the Tāpti and the Sātpurā Hills is chiefly covered with alluvium. Basalt of the Deccan trap group is the only other formation, composing the hills and showing here and there in the deeper ravines. Basalt probably occurs in the bed of the Tāpti, as in many places to the south it rises at no great distance from the stream; and though alluvium stretches north for 15 miles, rock appears near Bhusāwal at the point where the railway bridge crosses the Tāpti. About 5 miles from Burhānpur, and about a mile north-east of Chulkhan village, there is a singular patch of limestone, about 50 feet long. It shows no sign of crystallization and appears to contain no fossils. At one end there is white sandy rock, like decomposed gneiss, standing upright as if part of a vertical bed. The presence of rounded grains points to its being sandstone; and the whole rock is evidently part of an infra-trappean formation, either Lameta or Bāgh, brought up by a dike or included in a lava-flow. The Deccan trap in the north of Khāndesh shows signs of disturbance subsequent to its original formation. The beds are in some places horizontal, as in the Aner valley and near

Daulet, north of Chopda, and also westward as far as the Bombay-Agra road, where, on the top of the ascent to Sindwa, the beds stretch in horizontal terraces. The traps of Turanmāl are nearly horizontal, but in the low rises from Burhānpur to the neighbourhood of Raver the beds appear to dip northwards. North-west of Turanmāl is a low east-north-east dip which continues as far as the Udai river. The trap along the north boundary of Khāndesh has a low irregular northerly dip. There are four hot springs, three in Chopda and one in Shirpur [1].

Khāndesh is usually considered a separate botanical province of the Presidency, including the valley of the Tāpti and the western half of the Sātpurā Hills. The former is generally well wooded, and the latter is clothed with dense forests. In the east of the Khāndesh Sātpurās *anjan* and *salai* (*Boswellia serrata*) predominate. In Chopda and Shirpur teak is found in all the valleys. The Shāhāda forests are chiefly *khair*, and in Akhrāni *anjan* reappears on the banks of the Narbadā. On the west the spurs of the Ghāts are remarkable for the growth of *anjan*, and about Sāvda on the east the country has quite a park-like appearance. In the south-east the forest area is small, yielding only a small quantity of *anjan*. The chief trees are the banyan, mango (*Mangifera indica*), *mahuā* (*Bassia latifolia*), *pīpal* (*Ficus religiosa*), *palas* (*Butea frondosa*), *umbar* (*Ficus glomerata*), and *temburni* (*Diospyros melanoxylon*). The chief flowering plants are the *Hibiscus*, *Sida*, *Indigofera*, *Crotalaria*, *Butea*, *Cassia*, *Echinops*, *Trichodesma*, *Commelina*, *Ipomoea*, and *Celosia*. Botany.

Wild beasts are numerous, comprising the tiger, leopard, hunting cheetah, bear, caracal, wolf, bison, *sāmbar* deer, spotted deer, *nīlgai*, antelope, 'ravine deer' (gazelle), and the four-horned deer. Up to the seventeenth century the hilly tracts to the north of Khāndesh were a breeding ground for wild elephants. At the time of the introduction of British rule, and for many years after, tigers and leopards were found in every part of the District. As late as 1858, tigers were numerous; but since then, they have been very closely hunted, and are now rare. Fauna.

Owing to differences of elevation, the climate varies greatly in different parts of Khāndesh. In the western hills and forests and in the Sātpurās the rainfall is heavy; but over much of the centre and south it is scanty. Nevertheless the Climate.

[1] W. T. Blanford, 'Geology of the Tāpti and Lower Narbadā Valley, &c.,' *Memoirs, Geological Survey of India*, vol. vi, pp. 286-90 and 344-51.

District has till quite recently been considered safe from famine. The town of Dhūlia, which may be taken to illustrate the average, has an annual rainfall of 22 inches. Throughout the District it varies from 20 to 45. In the cold season (October to January), except on cloudy days, the climate is pleasant and bracing. During the hot months the air is extremely dry. At Dhūlia the temperature falls as low as 52° in January, rising to 110° in May, when the heat is excessive. The general health of the people is best in the hot and worst in the cold season. Malaria is rife at the beginning of the latter, when the ground commences to dry after the rains. In the east and centre, the climate is trying to Europeans, but healthy to the natives. In the west, all periods except the hot season are injurious to native and European alike.

History. The early history of Khāndesh extends from 150 B.C., the date of the oldest rock inscription yet discovered and deciphered, to the year A.D. 1295, when the Musalmān emperor Alā-ud-dīn suddenly appeared from Delhi. The mythical annals of the Hindu period may be said to commence with the mention in the Mahābhārata of the hill forts of Turanmāl and Asīrgarh: the ruler of Turanmāl is recorded as having fought against the Pāndavas; the fort of Asīrgarh is named as a place of worship to Ashvatthāma. Local tradition asserts that, from a time long previous to Christianity, the dynasty in power was that of a Rājput chief whose ancestors had come from Oudh. The first line of which distinct record remains is, however, that of the Andhras. The Andhras were temporarily displaced by the Western Satraps; in the fifth century A.D. the Chālukya dynasties rose to power; local chiefs followed; and Khāndesh was under the Chauhān ruler of Asīrgarh when Alā-ud-dīn appeared.

Muhammadan rule lasted until the Marāthās captured the stronghold of Asīrgarh in 1760. In the interval, until the Fārūkis, Khāndesh was subject to successive governors from Delhi, sent by the different dynasties that rose in that city. Under Muhammad bin Tughlak, from 1325 to 1346, Khāndesh was administered from Ellichpur in Berār. From 1370 to 1600 the Arab dynasty of the Fārūkis administered the District, and, though nominally subject to the Sultans of Gujarāt, were practically independent. The last year of the sixteenth century (1599) saw the coming of the Mughals. In that year Akbar in person overran Khāndesh at the head of an army, captured Asīrgarh, and sent the reigning prince, Bahādur Khān, to Gwālior for safe keeping. Khāndesh then became

incorporated into the Delhi empire. Its name was changed for a time to Dāndesh in honour of its new governor, prince Dāniyāl. In the middle of the seventeenth century it was highly prosperous. From 1670 Marāthā raids commenced, and it was for more than a century given up to every species of calamity, internal and external. In that year Sivajī, after his second sack of Surat, sent an officer to demand *chauth* in Khāndesh. The Marāthās captured and held Sālher fort, and afterwards Khande Rao Dābhāḍe established himself in the western hills. Thenceforward the District was the scene of numerous plundering raids. Sivajī, Sambhājī, and the emperor Aurangzeb ravaged it in turn. In 1720 Nizām-ul-mulk annexed Khāndesh and held it throughout his life. His son was ousted by the Marāthās in 1760. The Peshwā, on recovering the District, granted portions of it to Holkar and Sindhia.

In 1802 the country was ravaged by Holkar's army. For two seasons the land remained uncared for, the destruction and ruin bringing on a severe famine. In the years that followed, Khāndesh was further impoverished by the greed and misrule of the Peshwā. The people, leaving their peaceful callings, joined together in bands, wandering over the country, robbing and laying waste. It was in this state that, in 1818, the District passed into British hands. For many years after annexation the Bhīl tribes gave trouble by outbreaks of lawlessness, and were only brought into submission under the kindlier measures adopted in the time of Elphinstone (1825), who entrusted the work of pacification to the skilful hands of Outram, the founder of the Bhīl Corps. A serious riot occurred in 1852, and in 1857 the Bhīls broke out under the leadership of Bhāgojī and Kajarsing Naik; but these disorders were easily suppressed.

Archaeology.

Generally distributed over Khāndesh, as well as in Ahmadnagar and the Central Deccan, are the stone-built temples, reservoirs, and wells locally known as Hemādpanti, or in Khāndesh as Gauli Rāj. The term 'Hemādpanti' is derived from Hemādpant or Hemādri, the minister (*mantri*) of Rāmchandra (1271) the Yādava ruler of Deogiri, but is now applied to any old stone building. The local Khāndesh term 'Gauli Rāj' probably also refers to the Yādava kings. In Khāndesh thirty-nine Hemādpanti buildings are found, thirty-one of them being temples, six step-wells, and two stone-lined reservoirs. Some may be of greater age, but most of them were probably built in either the twelfth or the thirteenth century. These Hemādpanti buildings are all of blocks of cut stone carefully joined and put together without mortar. In some the stones

are so large as to have given rise to the saying that they are the work of giants.

Besides the Hemādpanti remains, the District possesses some Musalmān buildings, the most important of which is the mosque at ERANDOL. Pitalkhora glen in the Chālisgaon *tāluka* contains a ruined *chaitya* and *vihāra*, very early Buddhist works, probably dating from two centuries before Christ. In the valley beneath is the deserted city of Pātna, where there are old carved temples and inscriptions, while on the hill opposite are other and later caves. The temple of Krishna in Vāghali, built 200 years before Hemādpant lived, contains three fine inscribed slabs in the inner wall of the hall.

The people.

There are 31 towns and 2,614 villages in the District. The Census of 1901 disclosed a total population of 1,427,382, or an increase of 40 per cent. in the last thirty years. In previous years the numbers were: (1872) 1,030,106, (1881) 1,237,308, and (1891) 1,434,802. The increase of 20 per cent. in 1881 was due to immigration, attracted by the large area of unoccupied fertile land available for cultivation. The population decreased by 0·5 per cent. during the last decade, owing to a succession of bad harvests (1896–1901). The distribution by *tālukas* is as follows:—

Tāluka.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Taloda	1,177	1	193	33,881	29	− 40	1,080
Shāhāda	479	2	155	59,758	25	− 8	3,162
Nandurbār	992	1	203	67,369	88	− 1	2,818
,, Navāpur *petha*		...	81	20,068		− 34	271
Sindkheda	505	2	141	76,811	152	+ 5	2,963
Shirpur	651	1	99	50,177	77	− 10	2,045
Chopda	368	2	91	75,550	205	+ 4	2,763
Yāval	250	2	75	82,299	329	+ 2	4,614
Rāver	481	2	106	80,368	67	+ 5	4,667
Pīmpalner	933	...	151	56,638	61	− 5	2,000
Dhūlia	760	2	154	104,952	138	+ 7	6,435
Amalner	528	1	164	73,083	211	+ 4	2,458
,, Pārola *petha*		1	64	38,210		− 4	1,893
Erandol	458	3	195	105,840	231	...	6,435
Jalgaon	319	2	89	85,151	269	+ 1	5,516
Bhusāwal	570	3	105	76,943	192	− 2	5,387
,, Edalābād *petha*		...	75	32,372		− 9	1,163
Jāmner	527	2	155	91,739	174	+ 5	3,343
Pāchora	542	2	121	80,724	231	+ 1	3,934
,, Bhadgaon *petha*		1	65	44,612		+ 7	2,244
Chālisgaon	501	1	132	90,837	181	+ 21	3,582
District total	10,041	31	2,614	1,427,382	142	− 0·5	68,773

The chief towns are: DHŪLIA (the head-quarters of the new District of West Khāndesh), BHUSĀWAL, DHARANGAON, NASĪRĀBĀD, NANDURBĀR, CHĀLISGAON, BHADGAON, JĀMNER, ADĀVAD, CHOPDA, JALGAON (the head-quarters of the new District of East Khāndesh), PĀROLA, ERANDOL, AMALNER, FAIZPUR, PĀCHORA, NAGARDEVLA, and BODVAD. The average density is 142 persons per square mile, but the western portion of the District is on the whole more thinly populated than the east. Shāhāda and Taloda are the *tālukas* of lowest density, and Yāval and Jalgaon are the most densely populated. Of the total population, 90 per cent. are Hindus, 8 per cent Musalmāns, 12,298 or 0·9 per cent. Jains, and 11,600 or 0·8 per cent. Animists; Christians number 1,398. Gujarātī is in use among the higher classes of husbandmen to the north of the Tāpti, and it is the language of trade throughout the District; but Marāthī, the speech of the people in the south and west, is the language of Government offices and schools, and is gradually gaining ground. In their homes the majority of the people speak a dialect known as Khāndeshī or Ahirānī, a mixture of Gujarātī, Marāthī, Nemādī, and Hindustāni, in which Gujarātī predominates.

Castes and occupations.

The important castes are: Kunbī, 330,000; Bhīl, 167,000 (of whom 10,000 are Musalmāns); Mahār, 107,000; Marāthā, 94,000; Mālī (gardener), 60,000; Kolī, 57,000; Brāhman, 50,000; Vānī, 47,000 (chiefly Gūjars); Rājput, 40,000; Dhangar, 39,000; Vanjāri, 32,000; Teli (oil-men), 27,000; Sonār (goldsmith), 24,000; Nhāvi (barber), 21,000; Chamār (leather-worker), 20,000; Sutār (carpenter), 16,000; Shimpi (tailor), 16,000; and Māng, 13,000. Of the thirteen divisions of Brāhmans in the District, three understand but do not speak Marāthī; the remaining ten use that language. As a rule, the main divisions eat together but do not intermarry; the sub-divisions as a rule do both. Deshasths (32,546) are most numerous. The others are the descendants of Brāhmans from every part of India who found their way to Khāndesh. The Prabhus, a section of the 'writer' class, are scattered over the District, most of them in the service of the Government.

Besides the general body of cultivators, who are Kunbīs by caste, large numbers of Pārdhīs (5,150), a low caste of wandering hunters and snarers, and Rājputs have long been settled in the District. Another class of cultivators worthy of notice are the Gūjar Vānīs, the most industrious and well-to-do of the agricultural population. Their name, and their habit of speaking Gujarātī among themselves, show that they are immigrants

from Gujarāt. Most of the traders are foreigners: Baniās from Mārwār and Gujarāt, and Bhātias, recent comers from Bombay. Wandering and aboriginal tribes form a large section of the population. Many of the Bhīls are employed on police duties and as village watchmen. But though most have settled down to peaceable ways, they show little skill in farming. Since the introduction of British rule into Khāndesh, the efforts made, by kindly treatment and the offer of suitable employment, to win the Bhīls from a disorderly life have been most successful. With the Mahārs they form the labouring class in nearly all the villages of Khāndesh. The Nirdhīs dwell along the foot of the Sātmālas. In former times they were much dreaded. During seasons of revolt the most atrocious acts were invariably the work of the Nirdhīs. Vanjāris or Lamānis, the pack-bullock carriers of former and the gipsies of present times, have suffered much from the increased use of carts and the introduction of the railway. A few are well-to-do traders; but most of them live apart from the villages, in bands or *tāndās*, each with its own leader or *naik*. Forced to give up their old employment, they now live chiefly by grazing, and cutting grass and wood. The majority of the Musalmāns are converts from Hinduism and are styled Shaikhs (55,787). In 1901, 18,504 Pathāns, descendants of the Musalmān invaders, were found in the District. More than 50 per cent. of the population are agriculturists, and various industries support 22 per cent.

Christian missions.

Of the 821 native Christians in the District in 1901, 440 were Roman Catholics and 132 Anglicans. There are Roman Catholic chapels at Dhūlia, Bhusāwal, and Dharangaon. For missionary purposes the District is divided into three parts, the western portion being occupied by the Scandinavian-American Mission, the centre by the Church Missionary Society, and the east by the American Alliance Mission. The head-quarters of the first-named society are at Nandurbār, of the second at Dhūlia, while the Alliance Mission has stations along the Great Indian Peninsula Railway at Bhusāwal, Jalgaon, Pāchora, and Chālisgaon. Besides these, there are two smaller semi-independent missions: the Tāpti Valley Railway Industrial Mission at Navāpur, which works chiefly among the Bhīls, and the Peniel Mission at Dharangaon. The majority of the Christian population reside at Nandurbār, Dhūlia, Bhusāwal, and Dharangaon.

General agricultural conditions.

The soils are composed of all grades, from the deep rich black of the Tāpti valley to the poor stony red and white of the low trap ranges. The local husbandmen divide them into

four classes: *kāli* (black), *pāndhari* (white), *khāran* (salt), and *burki* (white and salt).

The District is chiefly *ryotwāri*, only about 2 per cent. of the total area being held on *udhād* tenure and 3 per cent. as *inām* land. The chief statistics of cultivation in 1903–4 are shown in the following table, in square miles:— Chief agricultural statistics and principal crops.

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.	Forest.
Taloda . .	1,177	100	1	18	15
Shāhāda . .	482	284	1	16	74
Nandurbār .	992	243	3	69	49
Sindkheda .	505	377	4	20	34
Shirpur . .	678	201	...	17	27
Chopda . .	368	228	...	16	14
Yāval . .	249	214	5	1	3
Rāver . .	480	205	3	12	12
Pīmpalner .	932	344	9	163	299
Dhūlia . .	759	412	7	55	199
Amalner . .	528	409	8	9	33
Erandol . .	458	366	3	8	27
Jalgaon . .	319	228	2	5	36
Bhusāwal .	570	379	3	23	106
Jāmner . .	527	370	1	39	65
Pāchora . .	542	388	3	17	44
Chālisgaon .	504	306	3	16	95
Total	10,070*	5,054	56	504	1,132

* For 2,530 square miles of this area statistics are not available. There have been changes since 1900 in the areas of several *tālukas*, owing to the introduction of the revision survey.

Jowār and *bājra* are both largely grown in Khāndesh, the areas under these crops being 667 and 929 square miles respectively. *Jowār* is chiefly grown as a *kharīf* crop, in rotation with cotton. *Bājra* everywhere holds a far more important place. Wheat, with an area of 182 square miles, is grown throughout the District, though most common along the Tāpti valley and in the west. The chief pulses are *tur*, gram, *udid*, *kulith*, and *mūg*, which together occupied 581 square miles in 1903–4. *Til* and linseed are the principal oilseeds, covering 250 and 63 square miles respectively. The former is considered the more profitable crop. The area under the latter varies considerably according to the nature of the late rains. Cotton, long one of the chief crops, occupied 2,013 square miles. It is seldom grown oftener than once in three years in the same field, and the local variety has been supplemented by Hinganghāt and Dhārwār seed.

Several attempts have been made, dating from 1829, to reclaim the Pāl *tappa*, a waste tract in the neighbourhood of Improvements in

agricultural practice. the Sātpurā Hills, which is said to have been formerly well inhabited. At the time of the British occupation in 1818, this was a deserted jungle, excessively unhealthy and infested with wild beasts. It is said to have been deserted about the middle of the seventeenth century, owing to famine; and the remains of ancient buildings show that the village of Pāl was formerly of considerable importance. Special efforts to improve the staple of the local cotton have been made for many years, but the cultivation of exotic varieties has not spread; it is found that the exotics speedily deteriorate in quality and give an inferior yield to that of the local variety. In 1903–4 a small plot of land was acquired by Government at Dhūlia, and several varieties of cotton and *jowār*, new to the District, were sown. The experiment is reported to be more promising than previous attempts, but definite results have not been arrived at. Sugar-cane is grown in small areas where irrigation is available. Chillies, fennel, and coriander are the principal condiments and spices. The cultivation of betel-vines is carried on with considerable success in garden lands.

The cultivators of Khāndesh have availed themselves freely of the Land Improvement and Agriculturists' Loans Acts, and nearly 25 lakhs was advanced during the decade ending 1904. Of this sum, nearly 20 lakhs represents advances made during the famine years 1899–1900, 1900–1, and 1901–2.

Cattle and ponies.

The District contains many fine cows and bullocks, brought chiefly from Nimār and Berār. The Thilāri herd of cattle of West Khāndesh has a good reputation in the Deccan; but the greater number of the cattle are small and poor, reduced during the hot season to the most wretched condition. The ponies also are small and of little value. To improve the breed, the Civil Veterinary department maintains two pony stallions at Dhūlia and Chālisgaon, which are not, however, fully utilized.

Irrigation.

Irrigation is practised mainly from dams thrown across the streams, particularly on the Girnā and Pānjhra rivers, and there are lakes and reservoirs which also serve for irrigation. The area under various classes of irrigation is 56½ square miles, or a little more than one per cent. of the total cultivated area of the District. Government canals supply 16 square miles, private canals one, wells 38, and other sources 1½ square miles. The dams must at one time have been very numerous. In the west there is scarcely a stream of any size without traces of them. Of works carried out by the Irrigation department the chief are: lower Pānjhra river works, the Hartāla tank, the Jāmda canals, and the Mhasva lake. The first two are old

works improved and extended; the others are new. The lower Pānjhra water-works, which are estimated to command nearly 20 square miles, supply about 4 square miles in Dhūlia and Amalner. The Jāmda canals on the Girnā, one of the earliest Government water-works, which are estimated to command 72 square miles, water about 2 square miles, mostly in Chālisgaon and Pāchora. The Hartāla lake in the Bhusāwal *tāluka* commands an area of 600 acres, but did not supply water in 1903–4. The Mhasva lake in the petty subdivision (*petha*) of Pārola in Amalner irrigated a total area of 181 acres, and is estimated to command 4,600 acres. Over most of the District water is found near the surface. But near the Sātpurās and within 8 or 10 miles of the Tāpti, wells have sometimes to be dug as deep as 100 feet. For drawing water the leathern bag or *mot* is in almost universal use. Each bag waters a quarter of an acre daily. In 1903–4, 83 other irrigation works (including the Parsul tank, irrigating 668 acres) watered 19,500 acres; wells numbered 27,031, and minor tanks 12.

Khāndesh is the most important forest District of the Bombay Presidency after Kanara. The absence of conservancy rules in the past and the destructive habits of the hill tribes have robbed the jungles of most of their valuable timber. The forest Reserves now cover more than 2,168[1] square miles, and the area of fodder reserves and pasture land under the control of the Revenue department is 284 square miles. They lie chiefly on the hills to the west and south-west, but much of the hilly land unsuited for cultivation may eventually be reserved for forest. In spite of its large area, Khāndesh uses more timber than it grows. The most important minor produce is the *mahuā* flower. Myrabolams and *mahuā* seed are collected in the west. Teak, *babūl*, and black-wood are of common occurrence. The gross forest revenue in 1903–4 amounted to 2·3 lakhs. The District is divided into two forest divisions, which are in charge of divisional Forest officers aided by two subdivisional officers. Forests.

Khāndesh has little mineral wealth. Building stone occurs everywhere, the best quarry being in the bed of the Vāghur river near Bhusāwal. *Kankar* or nodular limestone is found in all black soil and yields good lime, while clay suitable for brick-making is obtainable in all parts of the District. Minerals.

[1] This figure differs from that in the table on p. 423, owing to the omission of forest statistics of certain villages in the Shāhāda *tāluka* and to the non-inclusion in the revenue returns of the forest area of the Mehwās estates.

Arts and manufactures.

The crafts and industries are of some importance. Cotton-pressing and ginning is carried on in 36 presses with 2,228 operatives. The weaving of coarse woollen blankets is common all over the District. There is a cotton-spinning and weaving mill at Jalgaon, started in 1874, under the name of the Khāndesh Spinning and Weaving Company. It has 425 looms and 20,948 spindles, and employs 1,185 hands. The out-turn is over 2 million pounds of yarn and 1½ million pounds of cloth, and the paid-up capital 7½ lakhs. The cloth is sold in Khāndesh, Berār, and the Nizām's Dominions. There are railway workshops at Bhusāwal.

Commerce.

The most important article of export is cotton. The Bombay Bhātias buy it from local dealers and growers, and press it for direct shipment by sea. Of late years many Bombay mercantile houses have established agencies in Khāndesh, and towards the east in the rich Tāpti valley. Jalgaon and Bhusāwal are rising into important centres of trade. The other chief exports are food-grains, oilseeds, butter, indigo, wax, and honey. Of imports the chief articles are salt, spices, metals, piece-goods, yarn, and sugar. The internal trade is carried on by means of weekly markets and a succession of fairs and religious feasts.

Communications. Roads and railways.

At the beginning of British rule there were no made roads. The first to be constructed was the Bombay-Agra road, which runs via Mālegaon, Dhūlia, and Shirpur through the District. Since then road-making has made considerable progress, and some of the passes through the hills have been opened to cart traffic. Besides the Bombay-Agra road, the chief roads are those from Dhūlia to Surat and from Dhūlia to Mhasawad. The total length of roads is 955 miles, of which 325 are metalled. Of these, 300 miles of metalled roads and 252 miles of unmetalled roads are maintained by the Public Works department. Avenues of trees are planted on about 950 miles. The Great Indian Peninsula Railway runs for 137 miles through the south of the District from Naydongri to Bhusāwal, where it divides, one branch going to Jubbulpore and the other to Nāgpur. Branches from Jalgaon to Amalner, 35 miles long, and from Chālisgaon to Dhūlia, 35 miles in length, were opened in 1900. The Tāpti Valley Railway from Surat to Amalner, running for 108 miles through the central portion of the District from east to west, was opened in March, 1900, and has ten stations within its limits.

Famine and natural calamities.

The Tāpti and lesser streams are liable to sudden and disastrous rising of their waters. Six great floods caused more or less injury in the District during the nineteenth century.

In 1822 sixty-five villages were entirely destroyed by the Tāpti, and fifty were partly washed away, causing a loss in money value of 2½ lakhs. In 1872 the Girnā and Pānjhra rose 45 feet above the level of the river-bed, the latter sweeping away five hundred houses in the town of Dhūlia. A whole village on the opposite side of the river suddenly disappeared. One hundred and fifty-two villages were damaged, and property to the value of 16 lakhs was destroyed. Over one thousand persons were on this occasion relieved by public and private charity.

Besides the Durgā-devī famine, which is said to have greatly reduced the population of Khāndesh, the only scarcity mentioned before the beginning of the last century was in 1629. In that year, following the ravages of war, there was a total failure of rain which caused widespread distress. A severe famine was recorded in 1802–4, when the selling price of grain is reported to have risen to one seer per rupee. Great numbers died, and extensive tracts were left deserted and waste. This famine was due, not to any natural causes, but to the ravages of Holkar's army, which during two years (1802–3) spread desolation and famine throughout the District. Scarcities not amounting to famine occurred in 1824, 1833–6, 1845, 1876–7, and 1896–7. In 1896 the population suffered from a general rise in the prices of food. The early rains, however, were excellent, and the *kharīf* did not fail. The hill tribes therefore suffered little, and West Khāndesh was free from the pinch of the high prices. Relief works were maintained for fourteen months, the workers reaching a maximum of 36,560 in April, 1897. In 1899 the failure of the rains affected all parts of the District, and the distress lasted for fourteen months. The *kharīf* crop was a total failure and the *rabi* area was not sown, except in irrigated lands, there being no late rains. As early as October, 1899, the number on relief works exceeded 33,000. It advanced steadily till in March of 1900 it was 257,000, while the number on gratuitous relief was 13,000. From this it fell to 553 in February, 1901, rising again to 42,000 in July, 1901, and falling to 1,800 in September. It is calculated that 79,000 deaths occurred in excess of the normal during the period, and that 385,000 cattle died. The total cost was about 76 lakhs. Remissions amounted to 17 lakhs, and nearly 20 lakhs was granted in loans to agriculturists.

Locusts have sometimes visited Khāndesh, but seldom in sufficient numbers to do much harm. In 1869 a large cloud crossed the District from north to south, and in 1873 and 1878

they did some injury to the late crop. Rats in 1847–8, 1878–9, and in 1901–2 caused much havoc.

District subdivisions and staff.

The District is divided into seventeen *tālukas*, in charge of three covenanted Civilians and two Deputy-Collectors. Of the three covenanted Civilians, one is Personal Assistant to the Collector, who has also an extra Deputy-Collector as *daftardār*. There are four petty subdivisions or *pethas*: Pārola, Bhadgaon, Navāpur, and Edalābād, in the *tālukas* of Amalner, Pāchora, Nandurbār, and Bhusāwal respectively. The formation of two separate Districts is referred to in the note on p. 415. The Mehwās estates are included in the District for administrative purposes.

Civil and criminal justice.

The District and Sessions Judge at Dhūlia is aided for civil business by ten Subordinate Judges. Criminal justice is administered by 50 Magistrates, including the District Magistrate. The commonest forms of crime are theft, house-breaking, and dacoity.

Land revenue administration.

On occupation by the British, 1,146 Government villages were found entirely deserted, besides 413 which were uninhabited but partly tilled by persons living in the neighbouring villages; only 1,836 villages were inhabited. The establishment of order and the advent of high prices soon caused a rapid increase in tillage and revenue. But a subsequent fall in prices checked improvement, and progress was slow for several years. After 1832 the improvement began to be more marked, and continued steadily up to 1852. One of the first measures of improvement was the withdrawal from the hereditary officials of powers the possession of which by them was found to be a source of oppression to the people. The settlement of the revenue was then made direct with the cultivators and not with the headmen of the villages. The revenue was fixed on the average payments of ten previous years. Gradually, inequalities of measurement were reduced to a common standard. About 1830 it was found that the assessments were too high, leaving no margin to the cultivator for improvements. Great reductions were then made in the rates on irrigated lands; the rates on 'dry-crop' lands were also reduced, wherever this was found to be necessary, and liberal remissions were made. Still progress was slow; and no attempt was made until 1852 to introduce a survey, which, it was felt, would be very costly. In that year, as it appeared that the rates in Khāndesh were higher than in other Districts, it was determined to carry out a survey on a plan suited to a country where so much of the land was waste. The objects of it were misunder-

stood, and troops had to be called out. But, on the leaders being seized, the opposition died away and the work was carried out between the years 1854 and 1870. Since then the District has made a most marked advance. Its population has largely increased and the area under cultivation has nearly trebled. Cultivation has been pushed to the base of the hills; and only in a few parts can good land now be found untilled, while wild beasts have been driven from the plain to the hills and the ravines. This remarkable development is, no doubt, in great measure due to the facilities offered by the railway for the export of produce to better markets, and to the great demand for cotton, which Khāndesh is in a position to satisfy. The revision survey settlement was commenced in 1886 and completed (with the exception of a small area, chiefly in Nandurbār, originally settled in 1901–3) in 1904. The new survey found an increase in the cultivated area of 4 per cent. over the amount shown in the accounts, and the settlement enhanced the total revenue from 31 to 40 lakhs. The average assessment per acre of 'dry' land is Rs. 1–6; of rice land, Rs. 1–10; and of garden land, Rs. 2–14.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	34,13	39,76	50,32	48,60
Total revenue . .	46,27	57,40	64,72	67,59

Municipalities and local boards.

The District contains 21 municipalities: namely, AMALNER, PĀROLA, ERANDOL, DHARANGAON, BHADGAON, CHOPDA, SHIRPUR, SINDKHEDA, BETWAD, SAVADA, YĀVAL, BHUSĀWAL, JALGAON, DHŪLIA, SONGĪR, TALODA, SHĀHĀDA, PRAKĀSHA, NANDURBĀR, FAIZPUR, and RĀVER. The total receipts of these average nearly 3 lakhs. The District board and 17 *tāluka* boards had an income in 1903–4 of 4¼ lakhs. The principal source of income is the land cess. The expenditure amounted to 4¼ lakhs, including nearly 2 lakhs devoted to the maintenance and construction of roads and buildings.

Police and jails.

The District Superintendent of police is aided by three Assistant Superintendents, one probationary Assistant Superintendent, and four inspectors. There are altogether 37 police stations. The force in 1904 numbered 1,636: namely, 23 chief constables, 335 head constables, and 1,278 constables. The mounted police number 62 under 8 *daffadārs*. In addition to the District jail at Dhūlia, with accommodation for 450 pri-

soners, there are 23 subsidiary jails and 21 lock-ups which can accommodate 408 and 202 prisoners respectively. The daily average number of prisoners in 1904 was 493, of whom 16 were females.

Education. Khāndesh stands twelfth as regards literacy among the twenty-four Districts of the Presidency. The Census of 1901 returned 4.8 per cent. of the population (9.3 males and 0.2 females) as able to read and write. Education has made great progress of late years. In 1881 there were only 317 schools, attended by 18,656 pupils. The number of pupils rose to 29,346 in 1891 and to 30,293 in 1901. In 1903–4 the schools numbered 538 (including 122 private schools with 1,713 pupils), attended by 22,181 pupils, of whom 845 were girls. One is a high school, 12 are middle schools, 401 primary, one is a training school, and one an industrial school. Three are maintained by Government, 332 by local boards, 70 by municipalities, and 11 are aided. The training school and the industrial school are at Dhūlia. The expenditure on education in 1903–4 was $2\frac{1}{4}$ lakhs, of which Local funds contributed Rs. 73,000 and Rs. 24,000 was recovered as fees. Of the total, nearly 80 per cent. was devoted to primary schools.

Hospitals and dispensaries. The District contains twenty dispensaries, one hospital, and two other medical institutions, accommodating 167 in-patients. In these institutions 114,213 persons, including 1,229 in-patients, were treated in 1904, and 3,797 operations performed. The total expenditure was over Rs. 39,000, of which Rs. 16,940 was contributed by Local and municipal funds.

Vaccination. The number of persons successfully vaccinated in 1903–4 was 39,000, representing a proportion of 27 per 1,000 of population, which exceeds the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. xii (1880); A. F. Davidson, *Settlement Report* (1854).]

Taloda Tāluka.—*Tāluka* of West Khāndesh District, Bombay, lying between 21° 30′ and 22° 2′ N. and 73° 58′ and 74° 32′ E., with an area of 1,177 square miles. It contains one town, TALODA (population, 6,592), the head-quarters; and 193 villages. The population in 1901 was 33,881, compared with 56,775 in 1891. The decrease is due to emigration to neighbouring States, scarcity of water, and the prevalence of a virulent type of cholera during the last famine. This is one of the most thinly populated *tālukas* in the District, with a density of only 29 persons per square mile, the District average being 142. The demand for land revenue in 1903–4 was 1.1 lakhs, and for cesses Rs. 8,000. Taloda includes six

petty Mehwās estates, and is situated in the extreme north-west of the District. The most striking natural feature is the bold outline of the towering Sātpurās stretching from east to west, with a belt of thick forest infested by wild beasts along their foot. The prevailing soil is rich black loam. Where the land is tilled and open, the climate is not unhealthy; but in the villages along the base of the Sātpurās and in the west it is extremely malarious, and, except during April and May, unsafe for Europeans. The annual rainfall averages about 30 inches.

Shāhāda Tāluka.—*Tāluka* of West Khāndesh District, Bombay, lying between 21° 24′ and 21° 48′ N. and 74° 24′ and 74° 47′ E., with an area of 479 square miles. It contains two towns, SHĀHĀDA (population, 5,399), the head-quarters, being the larger; and 155 villages. The population in 1901 was 59,758, compared with 64,733 in 1891. This is the most thinly populated *tāluka* in the two Khāndesh Districts, the density being only 25 persons per square mile. The demand for land revenue in 1903–4 was nearly 3 lakhs, and for cesses Rs. 21,000. Although Shāhāda possesses two perennial streams, the Tāpti and its tributary the Gomi, it is on the whole scantily provided with surface water. The prevailing soil is a rich loam resting on a yellowish subsoil. The annual rainfall averages 24 inches.

Nandurbār Tāluka.—*Tāluka* of West Khāndesh District, Bombay, including the petty subdivision or *pethā* of Navāpur, lying between 21° and 21° 32′ N. and 73° 35′ and 74° 31′ E., with an area of 992 square miles. It contains one town, NANDURBĀR (population, 10,922), the head-quarters; and 284 villages. The population in 1901 was 87,437, compared with 105,866 in 1891. The decrease was due to emigration and the prevalence of cholera. The density, 88 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was 2·6 lakhs, and for cesses Rs. 18,000. The north of the *tāluka* forms part of the rich Tāpti plain. To the south and south-west parallel spurs jutting from the Western Ghāts divide the country into narrow village areas. The east is desolate and bare of trees. The climate is cool, and the annual rainfall averages 25 inches. The water-supply is scanty, the streams of only the Tāpti and the Siva lasting throughout the year.

Sindkheda Tāluka.—*Tāluka* of West Khāndesh District, Bombay, lying between 21° 4′ and 21° 66′ N. and 74° 28′ and 74° 58′ E., with an area of 505 square miles. It contains two

towns, SINDKHEDA (population, 5,021), the head-quarters, being the larger; and 141 villages. The population in 1901 was 76,811, compared with 73,385 in 1891. The density, 152 persons per square mile, is above the District average. The demand for land revenue in 1903-4 was 3·4 lakhs, and for cesses Rs. 24,000. The northern portion forms a continuation of the rich black soil of the Tāpti plain; the southern is for the most part hilly or undulating, with large tracts of waste land used for grazing cattle. Except along the banks of the Tāpti and the Pānjhra, Sindkheda is poorly supplied with surface water. The two chief rivers are the Tāpti, flowing along the entire northern boundary for a distance of 35 miles, and its tributary the Pānjhra, flowing along the eastern boundary. The annual rainfall averages 22 inches.

Shirpur Tāluka.—*Tāluka* of West Khāndesh District, Bombay, lying between 21° 11′ and 21° 38′ N. and 74° 42′ and 75° 17′ E., with an area of 651 square miles. It contains one town, SHIRPUR (population, 9,023), the head-quarters; and 99 villages. The population in 1901 was 50,177, compared with 56,012 in 1891. The density, 77 persons per square mile, is only about half the average for the District. The demand for land revenue in 1903-4 was 1·9 lakhs, and for cesses Rs. 12,000. A broken range of the Sātpurās, running from east to west, divides Shirpur into two parts, each with distinct natural features. The northern part comprises a wild and hilly country, sparsely peopled by Bhīls. The southern is an unbroken plain, with no trees except near village sites. The population is dense near the banks of the Tāpti, but becomes scanty as the hills are approached. Although the *tāluka* has three rivers that flow throughout the year—the Tāpti, and its tributaries the Anar and the Arunāvatī—and numerous other streams from the Sātpurās, the supply of surface water is on the whole scanty. The prevailing black soil is a rich loam resting on a yellowish subsoil. The annual rainfall averages nearly 24 inches.

Chopda Tāluka.—*Tāluka* of East Khāndesh District, Bombay, lying between 21° 8′ and 21° 25′ N. and 75° 1′ and 75° 34′ E., with an area of 368 square miles. There are two towns, CHOPDA (population, 18,612), the head-quarters, and ADĀVAD (5,983); and 91 villages. The population in 1901 was 75,550, compared with 72,819 in 1891. The density, 205 persons per square mile, is much above the District average. The demand for land revenue in 1903-4 was 2·3 lakhs, and for cesses Rs. 15,000. The *tāluka* consists of two valleys, divided by a spur of the Sātpurā range that

runs across it obliquely from east to west. The southern valley is a part of the rich north Tāpti plain, and follows the course of that river. The northern or inner valley, known as the Dhauli *taraf*, is a broken and hilly country, unsurveyed, covered with dense forest, inhabited by Bhīls, and infested by wild beasts. The Tāpti valley is fairly supplied with well water, but none of the streams is suited for irrigation. The chief rivers are the Tāpti, and its tributaries the Aner and Guli. The prevailing soil is a rich, black, alluvial clay, resting on a yellowish subsoil. The annual rainfall averages 25 inches.

Yāval Tāluka.—*Tāluka* of East Khāndesh District, Bombay, lying between 21° 3′ and 21° 24′ N. and 75° 31′ and 75° 53′ E., with an area of 250 square miles. It contains two towns, YĀVAL (population, 11,448), the head-quarters, and FAIZPUR (10,181); and 75 villages. The population in 1901 was 82,299, compared with 80,489 in 1891. This is the most thickly populated *tāluka* in the District, with a density of 329 persons per square mile. The demand for land revenue in 1903–4 was 1·7 lakhs, and for cesses Rs. 12,000. The *tāluka* consists of a rich well-wooded plain stretching southwards from the Sātpurā Hills.

Rāver Tāluka.—*Tāluka* of East Khāndesh District, Bombay, lying between 21° 3′ and 21° 24′ N. and 75° 46′ and 76° 10′ E., with an area of 481 square miles. It contains two towns, RĀVER (population, 7,870), the head-quarters, and SĀVDA (8,720); and 106 villages. The population in 1901 was 80,368, compared with 76,281 in 1891. The density, only 67 persons per square mile, is a little less than half the average for the District. The demand for land revenue in 1903–4 was 2·1 lakhs, and for cesses Rs. 14,000. The soil near the hills is somewhat light, but in other parts it is a fine rich vegetable mould of varying depth. The chief water-supply is the Tāpti river. The climate is generally healthy. Rāver forms an unbroken well-wooded plain lying below the wall of the Sātpurās. The annual rainfall averages 24 inches.

Pīmpalner.—*Tāluka* of West Khāndesh District, Bombay, lying partly above and partly below the Western Ghāts, between 20° 50′ and 21° 16′ N. and 73° 51′ and 74° 33′ E., with an area of 933 square miles. There are 151 villages, but no town. The head-quarters are at Sakri. The population in 1901 was 56,638, compared with 59,278 in 1891. The density, 61 persons per square mile, is about two-fifths of the average for the District. The demand for land revenue in 1903–4 was 1·3 lakhs, and for cesses Rs. 8,000. The plains are intersected by abrupt

mountain ranges, of which the range of the Selbāri hills is the most considerable. The tract below the Western Ghāts is composed of steep hill ranges, clothed with forest and inhabited by Bhīls. The climate is unhealthy, especially to Europeans and natives of the Deccan. There is a fair water-supply, the rivers being utilized for irrigation by means of masonry dams. The annual rainfall averages 21 inches.

Dhūlia Tāluka.—*Tāluka* of West Khāndesh District, Bombay, lying between 20° 38′ and 21° 8′ N. and 74° 26′ and 75° E., with an area of 760 square miles. It contains two towns, of which DHŪLIA (population, 24,726), the head-quarters, is the larger; and 154 villages. The population in 1901 was 104,952, compared with 98,142 in 1891. The density, 138 persons per square mile, is below the District average. The demand for land revenue in 1903–4 was 2·6 lakhs, and for cesses Rs. 17,000. The *tāluka* is crossed by low hills, is watered by the Pānjhra and Bori rivers, and is on the whole fairly wooded and well cultivated. The climate is healthy, except just after the rains. The water-supply, especially in the south, is scanty. The Lower Pānjhra water-works, consisting of the Mukti reservoir, ten dams across the river, and water-courses from the dams, ensure an unfailing supply of water to all lands commanded by them. The reservoir was formed by damming a gorge in the valley of the Mukti, which joins the Pānjhra 2½ miles from Dhūlia. The prevailing soil is red, but there are some patches of excellent black loam. The annual rainfall averages 22 inches.

Amalner Tāluka.—*Tāluka* of East Khāndesh District, Bombay, including the petty subdivision or *pethā* of Pārola, lying between 20° 42′ and 21° 13′ N. and 74° 52′ and 75° 14′ E., with an area of 528 square miles. It contains two towns, AMALNER (population, 10,294), the head-quarters, and PĀROLA (13,468); and 228 villages. The population in 1901 was 111,293, compared with 109,841 in 1891. The density, 211 persons per square mile, is much above the District average. The demand for land revenue in 1903–4 was 3·4 lakhs, and for cesses Rs. 23,000. Amalner is generally level and the land is largely tilled in the north; the southern portion, broken by a low chain of hills, is less cultivated. The Tāpti, with its tributaries the Bori and Pānjhra, affords an unfailing supply of water for irrigation. The chief works are those on the Lower Pānjhra and the Mhasva Lake. The latter consists of a reservoir, 4 miles in circumference, in the petty subdivision of Pārola, with a dam 1,500 feet long, and two

canals, each 3 miles in length. The climate is healthy, and the annual rainfall averages 23 inches.

Erandol Tāluka.—*Tāluka* of East Khāndesh District, Bombay, lying between 20° 44′ and 21° 9′ N. and 75° 9′ and 75° 31′ E., with an area of 458 square miles. There are three towns, including ERANDOL (population, 11,885), the head-quarters, and DHARANGAON (14,172); and 195 villages. The population in 1901 was 105,840, compared with 105,808 in 1891. The density, 231 persons per square mile, is above the District average. The demand for land revenue in 1903–4 was 3 lakhs, and for cesses Rs. 20,000. The soil is part of the fertile Tāpti valley. Mango groves are scattered all through the *tāluka*. Besides water-supply from the rivers, there were 2,213 wells used for irrigation in 1902–3. The annual rainfall averages nearly 29 inches.

Jālgaon Tāluka.—*Tāluka* of East Khāndesh District, Bombay, lying between 20° 47′ and 21° 11′ N. and 75° 24′ and 75° 45′ E., with an area of 319 square miles. There are two towns, JĀLGAON (population, 16,259), the head-quarters, and NASĪRĀBĀD (12,176); and 89 villages. The population in 1901 was 85,151, compared with 83,982 in 1871. The density, 269 persons per square mile, is much above the District average. The demand for land revenue in 1903–4 was 2·8 lakhs, and for cesses Rs. 18,000. Jālgaon is a rich black plain to the north, and hilly or undulating to the south. The climate is generally healthy.

Bhusāwal Tāluka.—*Tāluka* of East Khāndesh District, Bombay, including the petty subdivision or *pethā* of Edalābād, lying between 20° 47′ and 21° 14′ N. and 75° 41′ and 76° 24′ E., with an area of 570 square miles. There are three towns, BHUSĀWAL (population, 16,363), the head-quarters, BODVAD (5,670), and VARANGAON (5,822); and 180 villages. The population in 1901 was 109,315, compared with 114,011 in 1891. The density, 192 persons per square mile, is above the District average. The demand for land revenue in 1903–4 was 3·5 lakhs, and for cesses Rs. 24,000. To the north-west and along the Tāpti the country is flat and monotonous. The north-east of the *tāluka*, though flat, is here and there broken by *babūl* groves, especially along the banks of the Pūrna. The rest is more or less undulating, with straggling hillocks covered with loose stones and boulders. Along the north-east boundary runs a bold range of hills. The *tāluka* is scantily wooded, and without the mango groves so abundant in other parts of the District. The tract between the Pūrna river and the hills from

the Suki river to the eastern frontier is ruined by its deadly climate, and repeated attempts to recolonize deserted villages have failed. Elsewhere, the *tāluka* is fairly healthy. There is plenty of surface water. Besides the Tāpti river in the north, with its tributaries the Pūrna and Vāghur, and the minor streams the Sur and Bhogāvatī, there are more than 2,500 irrigation wells. The Hartala lake, with a catchment area of 6 square miles and a capacity of 140,000,000 cubic feet of water, lies on a small tributary of the Tāpti and commands 584 acres. As an irrigation work it has not proved altogether a success. Of the two kinds of black soil, the rich alluvial clay found north of Edalābād cannot be surpassed. In the east of Kurha, where it gives place to a rich black loam, it yields the finest crops. The other soils are mostly mixed red and brown. In the north-east the soil is poor, and the waste lands are generally dry and rocky. Along the river-banks are small alluvial plots called *dehli*. The annual rainfall at Bhusāwal town averages 26 inches.

Jāmner Tāluka.—*Tāluka* of East Khāndesh District, Bombay, lying between 20° 33′ and 20° 55′ N. and 75° 32′ and 76° 1′ E., with an area of 527 square miles. It contains two towns, JĀMNER (population, 6,457), the head-quarters, and SHENDURNI (6,423); and 155 villages. The population in 1901 was 91,739, compared with 87,230 in 1891. The average density, 174 persons per square mile, is above the District average. The demand for land revenue in 1903–4 was 2·4 lakhs, and for cesses Rs. 17,000. Most of the *tāluka* consists of a succession of rises and dips, with streams the banks of which are fringed with *babūl* groves. In the north and south-east low straggling hills covered with young teak rise out of the plain. There is a plentiful and constant supply of water. On the whole, the climate is healthy, but at the close of the rains fever and ague prevail. The chief streams are the Vāghur, with its tributaries the Kāg and Sur, the Harki and the Sonij. Most of these streams rise in the Sātmāla hills. There are also 1,950 wells. Generally speaking, the soil is poor. There is black loam in the valleys, and on the plateaux a rich brownish mould called *kālī munjal*.

Pāchora Tāluka.—*Tāluka* of East Khāndesh District, Bombay, including the petty subdivision or *pethā* of Bhadgaon, lying between 20° 28′ and 20° 50′ N. and 74° 57′ and 75° 36′ E., with an area of 542 square miles. It contains three towns, PĀCHORA (population, 6,473), the head-quarters, NAGAR DEVLA (6,050), and BHADGAON (7,956); and 186 villages. The popu-

lation in 1901 was 125,336, compared with 115,270 in 1891. The increase was due to immigration from Ahmadnagar and other famine-stricken regions. The density, 231 persons per square mile, is much above the District average. The demand for land revenue in 1903-4 was 3·9 lakhs, and for cesses Rs. 26,000. Pāchora consists of a fairly wooded valley, lying between the Sātmāla range to the south and low ranges of hills in the north. The climate is healthy. The only perennial stream is the Girnā. Irrigation is carried on by means of the Jāmda Canal. The annual rainfall averages 30 inches.

Chālisgaon Tāluka.—*Tāluka* of East Khāndesh District, Bombay, lying between 20° 16′ and 20° 41′ N. and 74° 46′ and 75° 10′ E., with an area of 501 square miles. It contains one town, CHĀLISGAON (population, 10,243), the head-quarters; and 132 villages. The population in 1901 was 90,837, compared with 74,880 in 1891. A proportion of the increase was due to immigration from the Nizām's territory during the last famine. The density, 181 persons per square mile, is above the District average. The demand for land revenue in 1903-4 was 2 lakhs, and for cesses Rs. 15,000. Chālisgaon is situated in the extreme south of the District at the foot of the Sātmāla range, which, running east and west like a wall, separates Khāndesh from the Deccan uplands. It is watered by the Girnā river, which flows from west to east through the northern villages, and by its tributaries the Manyād and Tittur, which in their turn are fed by several minor streams. Besides these and the Jāmda Canal, about 3,700 wells supply irrigation. The soil is mixed, much of it towards the south, south-west, and north being hard and stony. The black soil of the Girnā valley, though better than in the surrounding parts, is generally poor, as it rests on a sub-soil of either gravel or rock.

Mehwās Estates.—A group of six estates in the West Khāndesh District of Bombay, lying between 21° 30′ and 22° N. and 74° 10′ and 74° 50′ E., in the extreme west of Khāndesh, situated partly among the western extremities of the Sātpurās, and partly on the low ground below the hills spanning the interval between the Narbadā and Tāpti rivers. Population (1901), 14,639. The estimated yearly revenue is Rs. 70,000. The tract is broken and wild, and more or less covered with forest; it is abundantly watered by mountain streams flowing into the Narbadā and Tāpti. The climate is unhealthy and malarious from October to March. The estates are inhabited chiefly by Bhīls, with a sprinkling of Pāvras. In all parts there is a great deal of rich black soil, but cultivation has much

decreased since the famine of 1900. As the supply of grain does not meet the local demand, the people eke out a living on fruits, roots, and other forest produce. The main articles of trade are timber, *mahuā* flowers and seed, and myrabolams. The chieftains settle petty cases, but all important matters go before the Collector and Assistant Collector, who are respectively Agent and Assistant Agent. Civil and criminal justice are regulated by rules framed under Act XI of 1846. The six estates are:—

Estate.	Area in square miles.	Number of villages.	Population, 1901.	Gross receipts.	Tribute paid to Government.
				Rs.	Rs.
Chikhli .	200	38	3,579	15,813	...
Kāthi .	500	96	7,789	22,298	133
Raisingpur	200	80	2,258	19,706	...
Singpur .	20	4	524	8,129	...
Nāla .	23	6	232	3,440	...
Nawalpur.	20	5	257	645	...
Total	963	229	14,639	70,031	133

The ancestors of the Chikhli chieftain originally held lands from Rājpīpla; Jiva, the founder of the family, taking advantage of the turbulent times, established his power over 84 villages. A sum of Rs. 3,000, assigned by Government as an hereditary allowance, made mainly for foot and horse police in lieu of the blackmail formerly levied, was discontinued in the time of Rāmsing (1854–74). The ancestors of the Raisingpur (Gauli) chieftain were feudatories of Rājpīpla, and are said to have been ruined on its subversion by the Gaikwār (1763–1813). The remaining four chieftains were originally dependants of the chief of Budhawal; but in 1845 the latter was removed on suspicion of conniving at robberies in the neighbouring British territories, and his lands have since lapsed to Government.

Adāvad.—Town in the Chopda *tāluka* of East Khāndesh District, Bombay, situated in 21° 13′ N. and 75° 28′ E. Population (1901), 5,983, including many Tadvi Bhīls. It was once a place of some consequence, the head-quarters of a *tāluka*. The site of the old offices is now occupied by a schoolhouse, and the people are fast carting away the earth of the ruined fort in the centre of the town. A school for boys has 152 pupils. Among the objects of interest is a fine old stone-and-mortar step-well, 30 feet by 12, in a ruined enclosure known as the Lāl Bāgh ('red garden'). To the north of the town is a mosque, built, according to an inscription on one of the steps,

in 1678. Three miles to the north-west are the UNĀBDEV hot springs.

Amalner Town.—Head-quarters of the *tāluka* of the same name, East Khāndesh District, Bombay, situated in 21° 2′ N. and 75° 4′ E., at the junction of the Tāpti Valley Railway with the Jalgaon-Amalner line, on the left bank of the Bori river. Population (1901), 10,294. The municipality, which was constituted in 1864, had an average income during the decade ending 1901 of Rs. 6,800. In 1903–4 the income was Rs. 9,900, including Rs. 1,500 as sale proceeds of Government securities. There is an important local trade in grain. The town also contains two cotton-ginning factories and two presses, employing about 500 persons. A large fair is held annually in the month of May, in honour of Sakhārām Bhāwā, whose death, towards the close of the eighteenth century, is commemorated by a handsome temple. The town contains a Subordinate Judge's court, a dispensary, and three schools—one for girls with 57 pupils, and two for boys with 322 pupils.

Betawad.—Town in the Sindkheda *tāluka* of West Khāndesh District, Bombay, situated in 21° 13′ N. and 74° 58′ E., on the Tāpti Valley Railway. Population (1901), 4,014. The town was constituted a municipality in 1864. The municipal income during the decade ending 1901 averaged Rs. 2,900. In 1903–4 the income was Rs. 2,300. The town, which was formerly the head-quarters of a *tāluka*, contains a boys' school attended by 169 pupils.

Bhadgaon.—Town in the Pāchora *tāluka* of East Khāndesh District, Bombay, situated in 20° 40′ N. and 75° 14′ E., on the left bank of the Girnā river, 34 miles south-east of Dhūlia. Population (1901), 7,956. It has been a municipality since 1869. The municipal income during the decade ending 1901 averaged Rs. 5,900. In 1903–4 the income was Rs. 6,900. In the neighbourhood is the Jāmda Canal. There is some local trade in cotton, and two ginning factories are worked. The town suffered greatly from a flood in September, 1872, when about 750 houses were washed away. Bhadgaon contains a Subordinate Judge's court, a dispensary, and four schools, of which one, with 25 pupils, is for girls.

Bhusāwal Town.—Head-quarters of the *tāluka* of the same name in East Khāndesh District, Bombay, situated in 21° 3′ N. and 75° 47′ E., 64 miles east of Dhūlia, at the junction of the Nāgpur branch with the main line of the Great Indian Peninsula Railway. Population (1901), 16,363. Until the opening of the railway, Bhusāwal was a petty village. It

has since become an important centre, with large railway works and a considerable European population, and is the head-quarters of a subdivisional officer. A branch of the American Alliance Mission is at work, and maintains two schools. About 1,500 workmen are regularly employed here, of whom 100 are European or Eurasian engine-drivers and mechanics. The requirements of so many railway employés have attracted shopkeepers of all descriptions, but their business is confined to the supply of local wants. The railway premises consist of a handsome station, large locomotive workshops, and houses for the employés. The water-supply is brought from the Tāpti by means of a steam pump and pipe. The water is driven up to a large tank on the top of a handsome two-storeyed building, the lower storey being used as a billiard-room and the upper as a library. Gardens have been laid out, and tree-planting encouraged to such an extent that the site, formerly an open field, is now somewhat overgrown with trees. The village of Bhusāwal is on the opposite side of the line to the railway buildings. There is a large resthouse outside the railway gate for natives. Two ginning factories and two cotton-presses are busily employed during the season. Bhusāwal was acquired by the British Government with the rest of the Varangaon (now Bhusāwal) *tāluka* in 1861. It was constituted a municipality in 1882, and had an average income during the decade ending 1901 of Rs. 16,000. In 1903-4 the income was nearly Rs. 20,000, chiefly derived from a tax on houses and lands (Rs. 8,400) and grants for education (Rs. 5,000). The town contains a Subordinate Judge's court, three English schools, two vernacular schools, and two dispensaries, including one belonging to the railway company.

Bodvad.—Town in the Bhusāwal *tāluka* of East Khāndesh District, Bombay, situated in 20° 53′ N. and 76° E., 2 miles south of the Nādgaon railway station, which is now called Bodvad. Population (1901), 5,670. Bodvad is joined to Nādgaon by a metalled road, and has an important trade in cotton and oilseeds. The houses are for the most part poor and badly built, and the streets narrow, crooked, and dirty. It was once a place of some consequence, but the only remains are a ruined fort, town gateways, and a reservoir. The town contains two cotton-ginning and pressing factories, and a school for boys with 197 pupils.

Chālisgaon Town.—Head-quarters of the *tāluka* of the same name in East Khāndesh District, Bombay, situated in

20° 27′ N. and 75° 1′ E., on the Great Indian Peninsula Railway, 35 miles south of Dhūlia, with which it is connected by a branch line opened in 1900. Population (1901), 10,243. The town is of little importance except as being the head-quarters of a *tāluka*, although its trade has much increased since the opening of the railway. It contains a dispensary and five schools with 400 pupils, of which one, with 31 pupils, is for girls. A branch of the American Alliance Mission works here.

Chopda Town.—Head-quarters of the *tāluka* of the same name in East Khāndesh District, Bombay, situated in 21° 15′ N. and 75° 18′ E., 8 miles from the right bank of the Tāpti, 51 miles north-east of Dhūlia. Population (1901), 18,612. Chopda is probably a settlement of considerable antiquity, and its ruined fort shows that it was a place of much consequence under early Hindu rulers. In 1600 it was a large town and well peopled, with a temple of Rāmeshwar, to which Hindus came from great distances. It was handed over by Sindhia in 1820, restored to him in 1837, and came again under British rule in 1844. There is a large trade in cotton and linseed. The municipality, which was established in 1870, had an average income during the decade ending 1901 of Rs. 10,000. In 1903–4 the income was Rs. 9,900. The town contains a dispensary, five cotton-ginning factories, two cotton-presses, and six schools with 456 pupils, one of which, with 30 pupils, is for girls.

Dharangaon.—Town in the Erandol *tāluka* of East Khāndesh District, Bombay, situated in 21° 1′ N. and 75° 16′ E., on the Jalgaon-Amalner branch of the Great Indian Peninsula Railway. Population (1901), 14,172. Dharangaon was formerly the head-quarters of the Bhīl Corps. A considerable trade in cotton and oilseeds is carried on with Jalgaon, where many of the Dharangaon merchants have agents. The paper and cloth of Dharangaon were formerly held in esteem. At present the manufacture of paper has entirely ceased; but the weaving of coarse cloth still gives employment to more than 100 looms. In 1855 Government established a cotton-ginning factory at Dharangaon, with 93 saw-gins, under the management of a European overseer; merchants and cultivators were charged Rs. 10 a month for the use of a gin. But the experiment proved costly, and was subsequently abandoned. Under Marāthā rule, Dharangaon was the scene of a terrible massacre of Bhīls, who had on several occasions plundered the town. A factory was established here by the English as early as 1674.

The following year the town was plundered by Sivajī, and again in 1679. It was at that time one of the most flourishing marts in this part of the country. Six years later, in 1685, it was again plundered and burnt by Sambhājī. In 1818 Dharangaon came into the possession of the British; and it was here that Lieutenant (afterwards Sir James) Outram was engaged from 1825 to 1830 in training the Bhīls in an irregular corps. The town is badly supplied with drinking-water. It contains three cotton-gins and two presses, a dispensary, and six schools with 646 pupils, of which one, with 52 pupils, is for girls. The municipality, established in 1866, had an average income during the decade ending 1901 of Rs. 9,400. In 1903-4 the income was Rs. 13,800, more than half of which is derived from a tax on houses and land. An American mission, known as the Peniel Mission, works here, and maintains a school and an orphanage.

Dhūlia Town.—Head-quarters of West Khāndesh District, Bombay, and also of the Dhūlia *tāluka*, situated in 20° 54′ N. and 74° 47′ E., on the southern bank of the Pānjhra river, 35 miles north of Chālisgaon, with which it is connected by a branch line of the Great Indian Peninsula Railway. Population (1901), 24,726, including 18,766 Hindus, 5,333 Muhammadans, and 435 Jains. The town is divided into New and Old Dhūlia. In the latter the houses are irregularly built, the majority being of a very humble description; in the former there are regular streets of well-built houses, with a fine stone bridge crossing the Pānjhra. In 1872 Dhūlia was visited by a severe flood, which did much damage to houses and property.

Until the beginning of the nineteenth century Dhūlia was an insignificant village, subordinate to LALING, capital of the Laling or Fatehābād *tāluka*. Under the rule of the Nizām, Laling was incorporated with the district of Daulatābād. The fort of Laling occupies the summit of a high hill, about 6 miles from Dhūlia, overhanging the Agra road and the Avir pass leading to Mālegaon. This stronghold, like all ancient buildings in Khāndesh, is locally ascribed to the Gauli Rāj; but it was more probably built by the Fārūki kings, whose frontier fortress it subsequently became. To the same Arab princes may be attributed the numerous stone embankments for irrigation found throughout the country, of which those on the Pānjhra river, above and below Dhūlia, are good examples. The old fort is also assigned to this dynasty, but it was probably, like the town walls, restored and improved by the Mughal governors. Dhūlia appears to have passed

successively through the hands of the Arab kings, the Mughals, and the Nizām, and to have fallen into the power of the Marāthās about 1795. In 1803 it was completely deserted by its inhabitants, on account of the ravages of Holkar and the terrible famine of that year. In the following year Bālājī Balwant, a dependant of the Vinchūrkar, to whom the *parganas* of Laling and Songīr had been granted by the Peshwā, repeopled the town and received from the Vinchūrkar, in return for his services, a grant of *inām* land and other privileges. He was subsequently entrusted with the entire management of the territory of Songīr and Laling, and fixed his head-quarters at Dhūlia, where he continued to exercise authority till the occupation of the country by the British in 1818. Dhūlia was immediately chosen as the head-quarters of the newly-formed District of Khāndesh by Captain Briggs. In January, 1819, he obtained sanction for building public offices for the transaction of revenue and judicial business. Artificers were brought from distant places, and the buildings were erected at a total cost of Rs. 27,000. Every encouragement was offered to traders and others to settle in the new town. Building sites were granted rent free in perpetuity, and advances were made to both the old inhabitants and strangers to enable them to erect substantial houses. At this time Captain Briggs described Dhūlia as a small town surrounded by garden cultivation, and shut in between an irrigation channel and the river. From the date of its occupation by the British, the progress of Dhūlia appears to have been steady; but it is only since the development of the trade in cotton and linseed that the town has become of any great importance as a trading centre. Coarse cotton and woollen cloth and turbans are manufactured for local use, and a steam cotton-press was opened in 1876 by a Bombay firm. There are now nine ginning factories and six presses employing nearly 2,000 hands. Since 1872 a little colony of Musalmāns from Allahābād, Benares, and Lucknow have settled at Dhūlia, who say that they left their homes on account of poverty. They are Momins or Julāhās by caste, and declare themselves orthodox Muhammadans, but their co-religionists in Dhūlia take them to be Wahhābis. They support themselves by weaving *sārīs* of fine texture, which they sell at a lower rate than the local merchants. In 1873, on the withdrawal of the detachment of regular Native infantry, the Bhīl Corps for a time occupied the lines lying to the south-west of the town, where also are the jail, the courthouse, and offices,

and the dwellings of European officers; but no troops are now quartered in Dhūlia. Briggs's Suburb is the newest and most prosperous part of the town. There is a weekly fair on Tuesday, at which commodities to the estimated value of Rs. 50,000 change hands. The town was constituted a municipality in 1862, and had an average income during the decade ending 1901 of more than one lakh. In 1903-4 the income was Rs. 74,400, chiefly derived from rates and taxes. Dhūlia contains a high school with (1903-4) 425 pupils, an industrial school, a normal class, and six vernacular schools with 845 pupils, of which one, with 74 pupils, is a girls' school. Besides the chief revenue and judicial offices, the town contains two Subordinate Judges' courts, a hospital, and a branch dispensary. The Church Missionary Society maintains a school for both boys and girls.

Erandol Town.—Head-quarters of the *tāluka* of the same name in East Khāndesh District, Bombay, situated in 20° 55′ N. and 75° 20′ E., on the Anjāni river, 36 miles east of Dhūlia. Population (1901), 11,885. Erandol is connected by metalled roads with the towns of Dhūlia and Dharangaon (7 miles north-west), and the railway station of Mhasvād (9 miles south-east). It is a place of some antiquity, and was formerly celebrated for its manufacture of coarse native paper, an industry which still survives to a limited extent. There is a considerable trade in cotton, indigo, and grain, the chief market being Jālgaon, a station 27 miles north-east. The town has one cotton-ginning factory. A fine stone quadrangle in the town, known as Pāndav's *vāda*, contains the remains of a strongly built enclosed mosque, richly carved, and constructed of old Hindu materials. About 5 miles south-east of the town on the top of a hill is the beautiful tank of Padmālya, near which is a temple of Ganpati. The municipality dates from 1866. The municipal income during the decade ending 1901 averaged Rs. 9,100. In 1903-4 the income was Rs. 9,600. The town contains a Subordinate Judge's court, a dispensary, and five schools with 743 pupils, of which one, with 60 pupils, is for girls.

Faizpur.—Town in the Yāval *tāluka* of East Khāndesh District, Bombay, situated in 21° 10′ N. and 75° 52′ E., 72 miles north-east of Dhūlia. Population (1901), 10,181. Faizpur is famous for its cotton prints and its dark blue and red dyes. About 250 families dye thread, turbans, and other pieces of cloth, and print cloth of all sorts. A weekly timber market is held, and it is also one of the chief cotton marts,

in Khāndesh. The municipality, established in 1889, had an average income during the decade ending 1901 of Rs. 6,500. In 1903-4 the income was Rs. 7,100. The town contains five schools, with 564 pupils, of which one, with 57 pupils, is for girls.

Jālgaon Town.—Head-quarters of East Khāndesh District, Bombay, and of the *tāluka* of the same name, situated in 21° 1′ N. and 75° 35′ E., on the Great Indian Peninsula Railway, 261 miles north-east of Bombay. Population (1901), 16,259. Situated in the centre of a rich cotton-growing District, Jālgaon rose in the nineteenth century to the position of an important mercantile town. During the American Civil War (1862-5) it was the great cotton mart of Khāndesh. It suffered severely from the fall in value at the close of the war, but its trade has recovered. The chief articles of commerce are cotton, linseed, and sesamum. In 1903 there were six cotton-presses, two large cotton-ginning factories, and one cotton-spinning and weaving mill, all worked by steam. In the same year the number of looms was 425 and of spindles 20,948, while the out-turn amounted to 2 million pounds of yarn and $1\frac{1}{2}$ million pounds of cloth. The town has been greatly improved. A new suburb, Pollen-peth, has been built, and a market-place laid out. The municipality has made a garden on the site of part of the old cotton market. One of the most striking of many handsome buildings in the new suburb is a three-storeyed dwelling built by the *pātel* or headman of Pātri. Water is carried through iron pipes from the Mehrun lake, 2 miles distant. A metalled road connects Jālgaon and Neri, 14 miles distant, 24 miles beyond which are the celebrated Ajanta caves. The municipality was created in 1864. The municipal income during the decade ending 1901 averaged Rs. 37,000. In 1903-4 the income was Rs. 41,000. The town contains a Subordinate Judge's court, a dispensary, and six schools, with 574 pupils, of which one, with 63 pupils, is for girls. A branch of the American Alliance Mission has recently been established here.

Jāmner Town.—Head-quarters of the *tāluka* of the same name in East Khāndesh District, Bombay, situated in 20° 49′ N. and 75° 47′ E., on the small river Kāg, 60 miles east-by-south of Dhūlia. Population (1901), 6,457. Jāmner was a place of consequence in the time of the Peshwās. Its prosperity has recently shown signs of revival, owing to its rising cotton trade and ginning industry. The town has three cotton-ginning and pressing factories, a dispensary, and two schools, attended by nearly 200 boys.

Laling.—Ruined hill fort in West Khāndesh District, Bombay, situated in 20° 49′ N. and 74° 45′ E., 6 miles south of Dhūlia. The fact that this, and not Thālner, was granted to his eldest son, would seem to show that Laling was the chief fort of Malik Rājā (1370–99), the first of the Fārūki kings; and here in 1437 Nasīr Khān and his son Mīrān Adil Khān were besieged by the Bahmani general till relieved by the advance of an army from Gujarāt. Early in the seventeenth century (1629–31) the fort is more than once mentioned in connexion with the movements of the Mughal troops in their campaigns against the Deccan. Besides the fort, there are two small Hemādpanti shrines and a square Hemādpanti well.

Lasur.—Village in the Chopda *tāluka* of East Khāndesh District, Bombay, situated in 21° 18′ N. and 75° 15′ E., 8 miles north-west of Chopda town. Population (1901), 2,557. Lasur is now nothing but a collection of mud huts and irregularly built houses; but the ruins of a fort, a fine well, and the remains of a mosque attest its former importance. The fort was dismantled by the British, and the Thoke's mansion was burnt down a few years ago. The history of the family illustrates the state of Khāndesh in the beginning of the nineteenth century. The Carnatic mercenaries, employed by every petty proprietor, had made themselves so obnoxious that Gulzār Khān Thoke, the holder of the strong fort of Lasur, enlisted a body of Arabs to oppose them. Unable to control or pay his Arabs, he used to let them loose on the country round, till at last the other proprietors, entering into a league against him, bribed his Arabs to assassinate him at Lasur and his eldest son Alīyār Khān at Chopda. A second son, Alaf Khān, escaping from Lasur, took refuge with Surajī Rao Nimbālkar of Yāval. Returning with some Carnatic mercenaries lent him by the Nimbālkar, Alaf Khān, on pretence of paying the Arabs their arrears, entered the fort, and the Carnatic troops seized the Arabs and put them to death. But instead of being in possession of his own fort, Alaf Khān found that his hired force had orders to hold the fort for their master the Nimbālkar. Driven to despair, Alaf Khān allied himself with the Bhīls and plundered without mercy. At last the Nimbālkar agreed to give up the fort for a money payment of Rs. 10,000. This sum Captain Briggs advanced to the Thoke family and occupied the fort with British troops. Subsequently a member of the Thoke family was appointed keeper of the hills and of the Bhirram pass,

and the family now serve as headmen of the village. Lasur contains a boys' school with 8 pupils.

Māheji (or Chinchkhed).—Village in the Pāchora *tāluka* of East Khāndesh District, Bombay, situated in 20° 48′ N. and 75° 24′ E., on the Great Indian Peninsula Railway, 240 miles north-east of Bombay. Population (1901), 1,591. A municipality was established in 1871, but abolished in 1903. The village contains a poorly attended boys' school. The chief Hindu fair of Khāndesh is held here annually from January to March. The fair is held in honour of Māhejī, a woman of the agricultural class who became an ascetic in the seventeenth century. So great was her sanctity that vows were paid to her during her lifetime. After a twelve years' stay in the hamlet of Chinchkhed close by the site of the fair, Māhejī buried herself alive. The fair has lately lost much of its importance.

Nagar Devla.—Town in the Pāchora *tāluka* of East Khāndesh District, Bombay, situated in 20° 35′ N. and 75° 16′ E., about 5 miles east of Kajgaon station. Population (1901), 6,050. West of the town is a ruined Hemādpanti temple of Mahādeo. The town contains a school for boys with 190 pupils.

Nandurbār Town.—Head-quarters of the *tāluka* of the same name in West Khāndesh District, Bombay, situated in 21° 22′ N. and 74° 14′ E., on the Tāpti Valley Railway. Population (1901), 10,922. The town has been a municipality since 1867, with an average income during the decade ending 1901 of Rs. 12,500. In 1903–4 the income was Rs. 16,200, chiefly derived from urban rates and taxes. Nandurbār carries on a considerable trade with Surat and Bombay in cotton, wheat, and seeds. There is also a local trade in wood, transferred from Taloda since the opening of the Tāpti Valley Railway. The town contains three ginning factories and a cotton-press. There are also a Subordinate Judge's court, two dispensaries, and six schools with 450 pupils, of which two, with 39 pupils, are for girls. The exports are cotton, linseed, wheat, gram, and grass oil; the imports are salt, coco-nuts, and spices of all kinds. The staple industry is the extraction of oil from a grass known as *roshā*, about 100 stills being at work. This oil has long been held in repute as a remedy for rheumatism. A branch of the Scandinavian-American Mission has been established in the town. Nandurbār is one of the oldest places in Khāndesh. Under the name of Nandigara it is supposed to be mentioned in a Kānheri cave inscription of the third century A. D. According to local tradition, it was founded by Nand Gauli, in whose family it remained until conquered by the Muhammadans

under Muīn-ud-dīn Chishtī, assisted by the Pīr Saiyid Alā-ud-dīn. It was obtained by Mubārak, chief of Khāndesh, from the ruler of Gujarāt, in 1536; in 1665 it was a place of considerable prosperity, renowned for its grapes and melons. In 1666 an English factory was established at Nandurbār, and by 1670 it had become so important a trading centre that the English factors removed hither from Ahmadābād. It subsequently suffered in common with the rest of Khāndesh during the troubles of Bājī Rao's rule; and when it came into the possession of the British in 1818, the town was more than half deserted. It contains a number of old mosques and remains of ancient buildings. Many of the houses have beautifully carved fronts.

Nasīrābād Town.—Town in the Jālgaon *tāluka* of East Khāndesh District, Bombay, situated in 21° N. and 75° 40′ E., 2 miles south of Bhādli, on the north-eastern line of the Great Indian Peninsula Railway. Population (1901), 12,176. The town is noted for the manufacture of glass bangles by Musalmāns. There are several old mosques in the neighbourhood. Jālgaon, the head-quarters of the *tāluka*, lies about 6 miles to the west. Nasīrābād was several times harried by the Bhīls of the Sātmāla range before the occupation of the country by the British. In 1801 it was plundered by a freebooter named Juba, and again, just before the great famine of 1803, by one of the Peshwā's deputies. After this the village wall was built by one of the Purandhare family, to whom the town was given in grant. The town contains a cotton-ginning and pressing factory, and six schools, with 773 pupils, of which two, with 92 pupils, are for girls.

Pāchora Town.—Head-quarters of the *tāluka* of the same name in East Khāndesh District, Bombay, situated in 20° 40′ N. and 75° 22′ E., 35 miles south-east of Dhūlia, on the Great Indian Peninsula Railway. Population (1901), 6,473. There is a flourishing trade in cotton; and the town contains five ginning factories, four cotton-presses, a dispensary, and three schools with 257 pupils, of which one, with 38 pupils, is for girls. The American Alliance Mission has a branch here.

Pārola.—Town in the Amalner *tāluka* of East Khāndesh District, Bombay, situated in 20° 53′ N. and 75° 7′ E., 22 miles west of Mhasvād, on the Great Indian Peninsula Railway. Population (1901), 13,468. Pārola has been a municipality since 1864, with an average income during the decade ending 1901 of Rs. 8,700. In 1903–4 the income was Rs. 9,800. It is said to have been raised by its proprietor, Hari Sadāshiv

Dāmodar, from the position of a small village of fifty houses to that of a walled town. He is also said to have built, about 1727, the spacious fort, one of the finest architectural remains of the kind in Khāndesh. It must have been at one time a very strong place ; it is surrounded by a moat, and the entrance was formerly protected by a drawbridge and large flanking towers. During the Mutiny in 1857, the proprietors proved disloyal, and their estate was confiscated, the town being taken possession of by Government, and the fort dismantled. A considerable trade is carried on in cattle, cotton, *lugdas* (women's robes), and grain ; and the village of Mhasva, 2 miles distant, is famous for *ghī*. The town contains two cotton-gins, a cotton-press, a dispensary, and five schools, with 620 pupils, of which one, with 54 pupils, is for girls. Four miles south-west is a handsome temple of Mahādeo on an island in the Bori river.

Prakāsha.—Town in the Shāhāda *tāluka* of West Khāndesh District, Bombay, situated in 21° 31′ N. and 74° 25′ E., 45 miles north-west of Dhūlia, at the junction of the Tāpti river with two of its tributaries. Population (1901), 6,687. East of the town stands an old temple of Gautameshwar Mahādeo, in whose honour a great Hindu fair is held every twelve years, when the planet Jupiter enters the constellation Leo. There are several other interesting temples in the neighbourhood. The municipality, established in 1870, has recently been abolished. The town contains a boys' school with 165 pupils.

Rām Talao (or Sunābdev).—Hot springs in the Shāhāda *tāluka* of West Khāndesh District, Bombay, 4 miles west of Unābdev, in a narrow gorge formed by two low projecting spurs of the Sātpurā Hills, and evidently supplied from the same source as UNĀBDEV. In the woodland, 2 miles from the village of Wardi, close to Sunābdev, are traces of a large weir of great thickness and strength, which used to dam the hot water and form the Rām Talao. The water wells from the ground in one or two places at a temperature of about 90°, and seems to have no healing power. The bricks of the embankment are very large and strong, about a foot and a half long and from 2 to 4 inches thick. It is said that a Musalmān, in the pay of the owner of the village, who was in charge of Wardi, used the bricks in building a step-well. But from the day the well was opened a curse from the offended deity of the spring fell on the villagers. They were stricken with guinea-worm and fled from the place. After a time the village was again peopled, and the bricks were used in building a village office or *chāvdi*. No sooner was the office finished than the curse returned. Fever and dysentery

broke out, and in two years the village was once more empty and has never since been inhabited. The new village of Wardi lies outside the walls of the old village, where it is believed the offended deity of the pond still angrily guards what is left of his ancient bricks.

Rāver Town.—Head-quarters of the *tāluka* of the same name in East Khāndesh District, Bombay, situated in 21° 15′ N. and 76° 2′ E. Population (1901), 7,870. A good road, 2 miles long and carefully bridged, connects the town with the north-eastern line of the Great Indian Peninsula Railway. Rāver has a local reputation for its manufactures of gold thread and articles of native apparel. In the main street, leading from the market-place to the fort, the houses are nearly all three-storeyed, and have richly carved wooden fronts. Rāver was ceded by the Nizām to the Peshwā in 1763, and by the latter bestowed on Holkar's family. The municipality, established in 1892, had an average income during the seven years ending 1901 of Rs. 1,700. In 1903-4 the income was Rs. 3,900. The town contains three cotton-gins and presses, and three boys' schools with 268 pupils.

Sāvda.—Town in the Rāver *tāluka* of East Khāndesh District, Bombay, situated in 21° 9′ N. and 75° 53′ E., on the Great Indian Peninsula Railway. Population (1901), 8,720. Sāvda was finally ceded by the Nizām to the Peshwā in 1763, and was shortly afterwards bestowed on Sardār Rāste, whose daughter was given in marriage to the Peshwā. In 1852, in connexion with the introduction of the revenue survey, a serious disturbance occurred at Sāvda. From 10,000 to 15,000 malcontents gathered, and were not dispersed till a detachment of troops arrived and arrested 59 of the ringleaders. The municipality, established in 1883, had an average income during the decade ending 1901 of Rs. 9,500. In 1903-4 the income was Rs. 9,700. The chief trade is in cotton, gram, linseed, and wheat. At the weekly market, valuable Nimār and Berār cattle are offered for sale. The town contains two cotton-ginning factories, a dispensary, and four schools, with 520 pupils, of which one, with 36 pupils, is for girls.

Shāhāda Town.—Head-quarters of the *tāluka* of the same name in West Khāndesh District, Bombay, situated in 21° 33′ N. and 74° 28′ E., 48 miles north-west of Dhūlia. Together with Kukdel, it contained in 1901 a population of 5,399. A municipality was constituted in 1869. The income during the ten years ending 1901 averaged Rs. 7,000. In 1903-4 the income was Rs. 8,500. The town contains three cotton-ginning

factories, a dispensary, and four schools, with 262 pupils, of which one, with 21 pupils, is for girls.

Shendurni.—Town in the Jāmner *tāluka* of East Khāndesh District, Bombay, situated in 20° 39′ N. and 75° 36′ E., 12 miles east of Pāchora, on the Great Indian Peninsula Railway. Population (1901), 6,423. Shendurni was a grant made to the family priest of the Peshwā Bājī Rao. It contains a ruined Hemādpanti temple. An annual fair is held here in honour of the god Trimbak. The town has a cotton-pressing factory, and two boys' schools with 260 pupils.

Shirpur Town.—Head-quarters of the *tāluka* of the same name in West Khāndesh District, Bombay, situated in 21° 21′ N. and 74° 53′ E., on the Bombay-Agra road, 33 miles north of Dhūlia. Population (1901), 9,023. Shirpur suffered severely from floods in 1875, when water stood in places 6 feet deep, destroying property to the value of Rs. 32,000. It has been a municipality since 1870, with an average income during the decade ending 1901 of Rs. 9,700. In 1903–4 the income was Rs. 9,800. The town contains four cotton-ginning and pressing factories, a Subordinate Judge's court, a dispensary, and five schools, with 552 pupils, of which one, with 20 pupils, is for girls.

Sindkheda Town.—Head-quarters of the *tāluka* of the same name in West Khāndesh District, Bombay, situated in 21° 16′ N. and 74° 45′ E., on the Tāpti Valley Railway. Population (1901), 5,021. The municipality, established in 1864, had an average income during the decade ending 1901 of Rs. 4,000. In 1903–4 the income was Rs. 3,800. The town contains two cotton-ginning and pressing factories, a dispensary, and three schools, with 284 pupils, of which one, with 20 pupils, is for girls.

Songīr.—Town in the Dhūlia *tāluka* of West Khāndesh District, Bombay, situated in 21° 5′ N. and 74° 47′ E., 14 miles north of Dhūlia. Population (1901), 4,303. Songīr, like Dhūlia, has passed through the hands of the Arab kings, the Mughals, and the Nizām. From the Nizām it came to the Peshwā, who granted it to the Vinchūrkar, from whom it fell into the hands of the British Government in 1818. Not long after the occupation of Songīr by the British, the Arab soldiers, of whom there were many at that time in Khāndesh, made an attempt to recover the town and did actually take possession of a portion of it, but were eventually repulsed and completely defeated. Songīr has a local reputation for its brass and copper ware. Coarse woollen blankets and cotton cloths are also

woven. The fort is partly commanded by a hill about 400 yards to the south; the north and south ends are of solid masonry, and the walls of uncut stone are in good order in a few places. Of the inner buildings hardly a trace remains. There is a handsome old reservoir, and a fine old well. The municipality, established in 1869, has been recently abolished. The town contains a boys' school with 200 pupils.

Sultānpur Village.—Village in the Shāhāda *tāluka* of West Khāndesh District, Bombay, situated in 21° 38′ N. and 74° 35′ E., about 10 miles north of Shāhāda, on the site of a ruined city with an old fort and walls enclosing about a square mile. Population (1901), 340. Its present name is said to date from 1306, when Malik Kāfūr, on his way to conquer the Deccan, stopped here for some time. It was included in Gujarāt till, in 1370, it was taken by Malik Rājā (1370–99), the first Fārūki king of Khāndesh. Muzaffar, the Gujarāt king, hastened to recover it, and Malik Rājā was forced to retire to Thālner. In 1417 the joint forces of Malik Nāsir of Khāndesh (1399–1437) and Ghazni Khān of Mālwā invested Sultānpur, but retired on the advance of the Gujarāt army. In 1536, according to a promise made while a prisoner, Muhammad III made over Sultānpur and Nandurbār to Mubārak Khān Fārūki of Khāndesh. Under Akbar (1600) Sultānpur was a *mahāl* of the *sarkār* of Nazurbār or Nandurbār. The local story of the destruction of Sultānpur is that Jaswant Rao Holkar, escaping from Poona, formed an alliance with the Bhīls, and plundered such of the people as would not acknowledge him as their ruler. Lakshman Rao Desai, the chief man of Sultānpur, refused a demand for money; but Holkar, receiving an offer from another resident, entered the town with his Bhīl allies, and won over the garrison. The Bhīls were let loose, the town was laid waste, and except one man all the people fled. The state of the place, deserted but not decayed, and with clearly marked roads, avenues, and gardens, supports the truth of this story. Besides the fort, originally an intricate building of mud faced with brick, there are the remains of a great mosque known as the Jāma Masjid, of no particular merit, and now, like the other ruins, dismantled to supply building materials for the neighbouring villages. Outside the village is a ruined temple of Mahādeo. Opposite the usual camping ground is a small well-preserved temple built by Ahalyā Bai Holkar, regent of Indore. To the east of the village a garden, from 250 to 300 yards square, is enclosed by a brick-faced mud wall 3 feet thick, and entered by a striking,

brick gateway 30 feet high. The most interesting ruin is the mansion of Lakshman Rao Desai, once a handsome house, with a well-watered garden.

Taloda Town.—Head-quarters of the *tāluka* of the same name in West Khāndesh District, Bombay, situated in 21° 34′ N. and 74° 13′ E., 62 miles north-west of Dhūlia. Population (1901), 6,592. Taloda is the chief timber market of Khāndesh, and has also a considerable trade in *rosha* grass (*Andropogon schoenanthus*), oil, and grain. The best wooden carts of Khāndesh are manufactured here, costing about Rs. 40 each. The town, which was constituted a municipality in 1867, had an average income during the decade ending 1901 of Rs. 5,000. In 1903-4 the income was Rs. 5,400. The town contains a dispensary, and a boys' school with 180 pupils.

Thālner.—Village in the Shirpur *tāluka* of West Khāndesh District, Bombay, situated in 21° 15′ N. and 74° 58′ E., on the Tāpti river, 28 miles north-east of Dhūlia. Population (1901), 317. According to an old grant, Thālner was in the possession of the Gaulis or Ahīrs in 1128. Late in the fourteenth century (1370-99) Malik Rājā Fārūki chose it as his head-quarters. In 1498 it was invested by Mahmūd Begara of Gujarāt, and by him it was granted to one of his courtiers. At Thālner the Khāndesh king, Mīrān Muhammad Khān, was defeated by Changez Khān of Gujarāt in 1566. It passed to the Mughals in 1600. In 1750 the Peshwā received the fort; and after having been held by Holkar for some years, it was captured in 1818 by the British. The capture of Thālner was preceded by severe fighting, an active resistance being offered to Sir Thomas Hislop, who came to take possession. In storming the fort Major McGregor of the Royal Scots and Captain Gordon were killed. Their tombs are at Thālner. There are ten Muhammadan tombs of some little interest. The inscriptions are undecipherable, but they would seem to show that the tombs are of Fārūki kings, of whom four—Malik Rājā (1399), Malik Nāsir (1437), Mīrān Adil Khān (1441), and Mīrān Mubārak Khān—were buried at Thālner. The village contains a boys' school with 137 pupils.

Turanmāl.—Hill in the Sātpurā range, in the Taloda *tāluka* of West Khāndesh District, Bombay, situated in 21° 53′ N. and 74° 48′ E. This was once a seat of the rulers of Māndu, and consists of a long, rather narrow table-land, from 3,300 to 4,000 feet high, and about 16 square miles in area. A fine artificial lake on the hill-top and the remains of many temples and walls are locally ascribed to the saint Gorakhnāth. On the south

side of the hill a Jain temple of Pārasnāth is the scene of an annual fair in October. Save for a few wandering Bhīls, the hill is uninhabited. In the Mahābhārata the ruler of Turanmāl is mentioned as fighting with the Pāndavas.

Unābdev.—Place of interest in the Chopda *tāluka* of East Khāndesh District, Bombay, situated in 21° 16′ N. and 75° 29′ E., 3 miles north-west of Adāvad, under the Sātpurā Hills. It is remarkable for a hot spring, whose waters, issuing from a seemingly solid block of masonry forming the lower part of a Hindu temple, flow through a stone conduit fashioned like a cow's head, and are collected in a pond 25 feet square surrounded by a strong red-brick wall. Within the enclosure, close to the edge of the pond, is a resthouse and two small Hindu shrines, and outside the enclosure the water is collected in a cattle trough.

Varangaon.—Town in the Bhusāwal *tāluka* of East Khāndesh District, Bombay, situated in 21° 1′ N. and 76° E., 8 miles east of Bhusāwal town. Population (1901), 5,822. Formerly a town of considerable importance, it has declined since the establishment of Bhusāwal. Varangaon was handed over to the British Government by Sindhia in 1861. It had previously passed through the hands of the Mughals, the Nizām, and the Peshwā. The town contains a boys' school with 260 pupils.

Yāval Town (or Byāwal Sākli).—Town in the Yāval *tāluka* of East Khāndesh District, Bombay, situated in 21° 10′ N. and 75° 42′ E., 12 miles west of Sāvda. Population (1901), 11,448. Yāval formerly belonged to Sindhia, who gave it in grant to the Nimbālkar about the year 1788. By an agreement in 1821 with the son of the grantee, the British Government obtained possession of the town. In 1837 Yāval was restored to Sindhia, but again became British in 1843. The Nimbālkars provided the town, when it was in their possession, with a fort, which is still in good repair. Yāval was once famous for its manufacture of coarse native paper and for its indigo. Paper is no longer manufactured here. There are remains of indigo vats in the neighbourhood. Salt-pans can also be seen about 3 miles outside Yāval. The municipality was established in 1883. The income during the decade ending 1901 averaged Rs. 8,700. In 1903–4 the income was Rs. 9,600. The town contains three cotton-ginning and pressing factories, besides a Subordinate Judge's court, a dispensary, and five schools with 537 pupils, of which one, with 37 pupils, is for girls.

Nāsik District (*Nasica* of Ptolemy).—District in the Central Division of the Bombay Presidency, lying between 19° 35′ and 20° 53′ N. and 73° 15′ and 74° 56′ E., with an area of 5,850 square miles. It is bounded on the north and north-east by the District of Khāndesh; on the south-east by the Nizām's Dominions; on the south by Ahmadnagar; and on the west by Thāna District, the territories of Dharampur, Surgāna, and the Dāngs.

Boundaries, configuration, and hill and river systems.

With the exception of a few villages in the west, the whole District is situated on a table-land at an elevation of from 1,300 to 2,000 feet above the sea. The western portion, from north to south, called Dāng, is generally much divided by hills and intersected by ravines, and only the simplest kind of cultivation is possible. The eastern portion, called Desh, is open, fertile, and well cultivated. Except the line of the Western Ghāts, which run north and south, the general direction of the hills is from west to east, the higher portions being in the west. The SĀTMĀLA or Chāndor range of hills forms the watershed of the District, dividing the valley of the Girnā from that of the Godāvari. It stretches from Peint east into the Nizām's Dominions, and is crossed by several fair passes. The most important of these, which takes its name from the range, is traversed by a first-class bridged and metalled road. East of Rahudi, the Chāndor range ceases to be a barrier. Its chief peak, DHODAP, is 4,741 feet high. Several of the minor peaks are of religious and historic interest. A low range separates Dindori from Nāsik. On its peaks are the once celebrated fort of Rāmsej and the Jain cave-temples of Chāmbhār Lena (*see* NĀSIK TOWN). The other important ranges are the Selbāri and Dolbāri, varying from 3,000 to 4,000 feet. All streams of any size to the south of the Chāndor range are tributaries of the Godāvari, the principal of these being the Dārna, Kadva, Deo, and Maralgin. In the north of the watershed the Girnā and its tributary the Mosam flow through fertile valleys into the Tāpti. The District contains many hill forts, the scenes of engagements during the Marāthā Wars.

Geology.

Nāsik District is entirely occupied by the Deccan trap formation, which appears at the surface except where hidden under recent soil or concealed beneath some comparatively limited outcrops of pliocene or pleistocene gravels. The Deccan trap consists as usual of successive flows of basalt, with a slight dip towards the east, which once accumulated to a thickness of several thousand feet. Denudation acting uninterruptedly during a protracted series of geological ages has

removed the greater part of this enormous mass; and the latest flows are now reduced to small disconnected remnants forming the peaks of lofty hills, of which the summits indicate the former level of the land. Some of the basalt flows are of great thickness and vast horizontal extent, and the same flow can often be recognized in several of the detached hills which denudation has isolated from one another. Over most of the low-lying portions of the District the surface of the basalt has weathered into fertile black soil. The red laterite which caps so many flat-topped hills of the Sahyādri range farther south has been almost all worn away within Nāsik District. The beds of clay and conglomerate that form high cliffs along the banks of the Godāvari at Nandur Madmeshwar must have been deposited when the head-waters of the river flowing eastwards were situated to the west of their present sites.

In these gravels have been found remains of hippopotamus, and the skull and several bones of a gigantic elephant (*E. namadicus*), a variety of *E. antiquus* which flourished in Europe towards the close of the pliocene and commencement of the pleistocene period. In the so-called older alluvium of the Narbadā, which is probably pliocene in age, the remains of *E. namadicus* occur, together with those of *E.* (*Stegodon*) *ganesa-insignis*, a Siwālik species. A well near Bhadra Kālī's temple in Nāsik, and another near the Nāsik jail, are remarkable for the presence of nitrates in large quantities.

Botany. The botanical features differ little from those of adjacent Districts. There is the same luxuriance of vegetation on the Western Ghāts and the same bare country on the Deccan side. The mango and *babūl* are the commonest trees. Along the roadsides grow the *pīpal*, banyan, *pipri*, *umbar*, *karanj*, tamarind, mango, *nīm*, *jāmbul*, and *babūl*. The *Clematis triloba*, *Heylandia*, *Pulicaria*, *Indigofera*, *Impatiens*, *Exacum*, *Canscora*, and *Cyathocline* flower in most parts of the District. The neighbourhood of Nāsik town provides good grapes.

Fauna. Of wild animals, leopards, antelope, and spotted deer are fairly common. Tigers are only occasionally met with.

Climate, temperature, and rainfall. The climate of Nāsik town and of the whole of the west of the District is the best in the Deccan. It varies in different parts, but on the whole presents greater extremes of heat and cold in the east than in the west. In January extreme cold and in April extreme heat are experienced. During the rest of the year, constant breezes from the west and south-west equalize the temperature. In 1903 the temperature varied from a minimum of 50° in February to a maximum of 105°

in April. The annual rainfall at Nāsik town averages 29 inches, while at Igatpuri it is 133. The only other tract with a considerable rainfall is Peint, where the average is 87 inches. At other places the rainfall in 1903 varied from 20 inches at Mālegaon to 31 inches at Dindori.

History. From the second century B.C. to the second century A.D. the District was under rulers, notably the Andhras, who patronized Buddhism, and some of whom are supposed to have had a capital at Paithan, 110 miles south-east of Nāsik. Among other early Hindu dynasties were the Chālukyas, the Rāthors, and the Chāndor and Deogiri Yādavas. The Muhammadan period lasted from 1295 to 1760, during which the District was successively under the viceroys of Deogiri (Daulatābād), the Bahmanis of Gulbarga, the Nizām Shāhis of Ahmadnagar, and the Mughals of Delhi, when it formed part of the *Sūbah* of Aurangābād. The Marāthā ascendancy lasted from 1760 until 1818, when the British power crushed the last of the Peshwās. Since then twice only has the peace of the District been disturbed—once in 1843, when serious breaches of order arose on the slaughter of a cow by Europeans in Nāsik town; and again in 1857, when some Rohillas, Arabs, and Bhīls gathered under the outlaw Bhāgojī.

Archaeology. The town of Nāsik is a place of great antiquity and sanctity, being associated with the legend of Rāma. The important cave-temples are the Buddhistic caves known as Pāndu Lena and the Jain caves of Chāmbhār (*see* NĀSIK TOWN), and those of Ankai and of Tringalvādi near Igatpuri. Nāsik has now a large number of temples, mostly dating from the eighteenth century, and not remarkable for their architectural beauty. The temple of Govindeshwar in SINNAR forms a strong contrast to the smaller and richly carved temples of Lakshmī Nārāyan at Pedgaōn in Ahmadnagar District, being adorned chiefly with bands and panels of arabesque and other decoration, instead of figure sculpture. The shrine of Aieshwara in the north-west of the town of Sinnar is the remains of a Dravidian temple. The Govindeshwar group is the finest collection of mediaeval temples in the Deccan. The porch of the Jogeshwar temple at Devalana in Bāglān is elaborately decorated, though much damaged. An immense hoard of silver coins of the Western Satraps was found in the District in 1906.

Hill forts. Hill forts, of which the District contains thirty-eight, may be divided into two classes: those on the main range or on the eastern spurs of the Western Ghāts, and those on the Chāndor range in the centre of the District. There are

twenty-three Western Ghāt forts, the chief being GALNA ANJANERI, TRIMBAK, KULANG, and ALANG, and KALSŪBAI. Fifteen forts lie on the Chāndor range, including ANKAI, CHĀNDOR, and DHODAP, SAPTASHRING or Chatarsingi, one of the principal hills in the Chāndor range, is not fortified because it is sacred to the Saptashring goddess. The Nāsik hill forts bear a great likeness to one another. They are built on isolated hills rising like islands from the plateau, or on peaks connected by low narrow necks. Each hill is capped by a mass of rock scarped by nature, the crest being surrounded with walls pierced by massive gates at accessible spots. Besides the walls and gates, the only work required of man was the construction of cisterns to hold water, and flights of steps. Of the origin of these forts there is no authentic history. Report ascribes the construction of most of them to Sivajī; but many of them undoubtedly existed before his time, and were the works of the early Hindu rulers. Thus, in 808, Mārkinda fort appears to have been an outpost of a Rāshtrakūta king. During the Mughal ascendancy the Muhammadans became the masters of the forts, and have left traces of their handiwork in Saracenic arches, inscriptions, and tombs.

The people.

The number of towns and villages in the District is 1,649. At the last four enumerations the population was: (1872) 737,685, (1881) 781,129, (1891) 843,496, and (1901) 816,504. The decrease in the last decade was due to famine, which affected the entire District. The distribution in 1901 of the population into twelve *tālukas* is shown in the following table:—

Tāluka.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Bāglān	601	...	156	64,645	108	− 1	2,636
Mālegaon	777	1	146	96,707	124	+ 12	3,413
Kalvān	494	...	188	53,616	109	− 11	1,685
Peint	432	...	227	53,392	124	− 10	508
Dindori	532	...	126	66,401	125	− 20	2,052
Chāndor	377	2	107	55,968	148	+ 9	2,584
Nāndgaon	435	1	88	37,691	87	+ 12	1,43[illegible]
Nāsik	470	3	135	96,872	206	− 6	7,364
Niphād	415	...	119	92,791	223	+ 0·5	4,326
Yeola	410	1	119	56,584	138	− 14	3,[illegible]52
Sinnar	514	1	101	75,375	147	+ 3	3,017
Igatpuri	393	1	127	66,462	169	− 4	2,381
District total	5,850	10	1,639*	816,504	140	− 3	35,175

* The Agricultural department's returns give the total number of villages as 1,695.

The chief towns are: NĀSIK, the head-quarters, MĀLEGAON, YEOLA, IGATPURI, SINNAR, MANMĀD, NĀNDGAON, CHĀNDOR, and TRIMBAK. The average density is 140 persons per square mile. Nāndgaon, with only 87, is the most thinly populated *tāluka*. Classified according to religion, Hindus formed 93 per cent. of the total, Musalmāns 5 per cent., Jains one per cent.; and Christians numbered 2,935. The vernacular of the District is Marāthī.

Castes and occupations.

The establishment of Marāthā power attracted many Brāhmans to the District. These, numbering 27,000, are mainly Deshasths (21,000). The Yajurvedi Deshasths are the priestly class of the holy cities of Nāsik and Trimbak. Marāthās (163,000) and Marāthā Kunbīs (139,000) occupy the western portions, and are in general skilful and successful cultivators. The more primitive Kolīs (75,000), found along the Western Ghāts, are hardy and active. Formerly of unsettled habits, of late years they have taken peacefully to agricultural pursuits. Other castes of importance are Bhīls (52,000), Vanjāris (31,000), Mālīs (28,000), Thākurs (17,000), and Vārlis (9,000). Bhīls live a wandering life in the Dāng or are settled in the richer parts of the Desh, where they do duty as village watchmen, residing in hamlets, known as Bhīlvādas, close to the village site. Telis (oil-pressers) number 11,000, Dhangars (shepherds and blanket-weavers) 15,000. Of the depressed classes, 73,000 are Mahārs or village menials. Of the total population, 59 per cent. live by agriculture, 9 per cent. by general labour, and 2 per cent. by mendicancy. It is characteristic of the population to collect into small compact villages. The inhabitants of the villages at the foot of the Western Ghāts are to a great extent migratory. Their poor lands seldom yield crops for more than two years in succession; and often in the hot season—their stock of grain running low—they are compelled to retire to the forest and support themselves by felling and carrying timber, feeding on fish, berries, and even roots. The Musalmāns (44,000) are nearly all of foreign origin, and are for the most part settled in the towns.

Christian missions.

Of the 1,780 native Christians in 1901, 940 belonged to the Anglican communion and 722 were Roman Catholics. The Christian village Sharanpur, in the immediate vicinity of Nāsik, which was founded by the Rev. W. S. Price of the Church Missionary Society in 1854, contains an orphanage, mission houses, schools, and workshops, built upon land granted by Government. For twenty-two years before the establishment of a separate village there was a Christian school and orphanage

in Nāsik town. In 1865 Dr. Livingstone visited the settlement, and took with him to Africa several rescued African slave-boys who were being educated there. The orphanage contained 200 boys and 129 girls in 1905, and is equipped for the teaching of carpentry, smiths' work, and printing. The Church Missionary Society has branches at Mālegaon, Manmād, Nāndgaon, Deolāli, and Igatpuri, and maintains 14 vernacular schools, of which 7 are for boys, 6 for girls, and one is for both sexes, and 5 Anglo-vernacular schools, of which one is for girls. The number of pupils in these schools in 1905 was 969. The Zanāna Mission maintains a hospital and a small orphanage at Nāsik, and a home for native girls at Manmād.

General agricultural conditions.

The soil may be divided into four classes: the reddish-black mould along rivers; a light black soil higher up; a brown soil, stiffer and shallower, found on the higher lands near the Ghāts; and highest and lightest of all, light brown or red, often strewed with boulders and mixed with lime. A second crop is not often raised. Manure is invariably used for all garden crops, but rarely for others.

Agricultural statistics and principal crops.

The District is mainly *ryotwāri*, but contains *inām* lands covering 438 square miles. The chief statistics of cultivation in 1903-4 are shown below, in square miles:—

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Bāglān . . .	601	320	10	17	188
Mālegaon . .	777	485	9	16	191
Kalvān . .	494	214	5	22	150
Peint . . .	432	166	...	96	145
Dindori . .	532	377	12	30	87
Chāndor . .	385	294	12	4	37
Nāndgaon . .	435	214	1	8	164
Nāsik . . .	470	329	12	10	67
Niphād . .	412	344	15	3	6
Yeola . . .	410	313	6	2	49
Sinnar . . .	514	390	15	2	55
Igatpuri . .	394	278	...	4	84
Total	5,856*	3,724	97	214	1,223

* Of this total, which is based upon the most recent information, statistics are not available for 142 square miles.

Bājra, the staple food of the people, covers an area of 1,099 square miles; it is sown with a mixture of pulses. Wheat (393 square miles) is grown largely in the central and southern *tālukas*; it is a fine grain, hard and white. *Jowār* occupies 161 square miles. Rice and *nāgli* are grown on hill

lands. Of pulses, the chief are *kulith* (145 square miles), gram (95), and *tur* (32). Oilseeds of various kinds occupy as much as 508 square miles. Of these, linseed is especially important; the area under *khurāsni* or niger-seed is usually larger, but this crop is not in demand for export. Cotton occupies an increasing area (111 square miles in 1903–4), especially in Mālegaon, and tobacco of inferior quality is raised in small quantities over the whole District. Much care is devoted to the cultivation of sugar-cane. Among garden products, three varieties of the vine have long been grown by Nāsik Kunbīs and Mālīs. Guavas, potatoes, and ground-nuts, and, in selected tracts, the betel-vine are also cultivated. The Bāglān *tāluka* is specially noted for its garden cultivation. Rice and hill-millets are the staples of the Dāng, with *khurāsni*, which is grown in rotation with the millets. The usual rotation is *nāchni*, *sāva*, and *khurāsni*. After the third year's crop has been reaped, the land lies fallow for several years. In Peint the area of land prepared for rice is comparatively small. Here cultivation is backward, and little labour has been spent on embanking land for rice.

Improvements in agricultural practice.

About 1839 Mr. Grant obtained from Government a grant of 154 acres of land near Nāsik rent free for five years for agricultural experiments. Potatoes of good quality were successfully grown and distributed among local husbandmen, who soon became alive to the value of the crop. In addition to supplying local wants, Nāsik potatoes found their way to the Mālegaon and Mhow cantonments. Besides introducing potatoes, Mr. Grant brought many grass seeds from France, Italy, and Malta. Indigo and upper Georgian green-seeded cotton and Bombay mango-trees and coffee plants were also tried, but all failed. Mauritius sugar-cane, peas, and European vegetables were grown to a considerable extent, and the seeds distributed among the people. Large advances have been made to cultivators under the Land Improvement and Agriculturists' Loans Acts, amounting during the decade ending 1904 to 14½ lakhs, of which 9·37 lakhs was advanced between 1899–1900 and 1901–2.

Cattle, ponies, &c.

One pony stallion is maintained for horse-breeding purposes at Mālegaon by the Civil Veterinary department. Nāsik possesses a local breed of bullocks which, though small, are fit for agricultural work and cost from Rs. 20 to Rs. 200 per pair. Other breeds are the Surti, Varhādi, Kilhāri, Mālvi, and Gāvrāni. Of these the Kilhāri, from Indore, are trotting bullocks, too small for field-work. Buffaloes are used for ploughing,

heavy draught-work, and water-carrying. Sheep are of two kinds, Gairāni and Harāni, the latter being distinguished by a short muzzle. Professional shepherds use the wool for weaving, the bones for sickle handles, and the skins for drums. Of goats, the Nimār variety with long twisted horns is far more valuable than the small local breed. In Sinnar, Yeola, and other level tracts small ponies, useful for pack-carrying, are bred.

Irrigation. Irrigation by wells and dams has been long in vogue, and the irrigated area is now considerable, amounting to 97 square miles. The areas irrigated from various sources are: Government channels and canals, 27 square miles; wells, 52 square miles; and other sources, 18 square miles. Among larger works are the Kadva river works and the Parsul tank. The former, which command 63 square miles, include the Pālkhed canal in Dindori and Niphād, opened in 1873, supplying 3 square miles; the Vadāli canal in Niphād, an old scheme improved and enlarged in 1868, supplying 391 acres; and the Ojhar Tāmbat in Dindori and Niphād, also an old work improved in 1873, irrigating 495 acres. All these canals are fed by a large reservoir at Vāghad, 18 miles north of Nāsik town, in which rain-water is stored. The Parsul tank, which commands 5 square miles, irrigated 668 acres in 1903-4. Wells used for irrigation number 21,700, chiefly found in Nāsik, Mālegaon, Sinnar, and Niphād. The depth of water varies from 6 to 32 feet. The water-supply of Peint is deficient.

Forests. The forests which formerly covered the Western Ghāts have nearly disappeared, but every effort is being made to prevent further destruction and to afforest some of the hills. The Nāsik forest circle, with a total area of about 1,362[1] square miles, includes three groups—the Girnā, Godāvari, and Peint forests—the lines of hills at Saptashring and Peint being fairly covered with trees. The Reserves are of four chief classes: scrub forest, teak coppice, evergreen forest, and *babūl*. They contain few timber trees of any value. The forest administration is under a divisional Forest officer with one assistant. The revenue in 1903-4 amounted to nearly Rs. 54,000.

Minerals. Good building stone is obtainable from the basalt of the trap which occupies the whole of the District. Fine specimens of zeolites occupying cavities in the basalt were disclosed

[1] This figure exceeds the total given in the table on p. 460 owing to corrections not having been made in the forest registers, and to the non-inclusion in the agricultural returns of 87 square miles of 'protected' forests.

during excavations necessitated by the construction of the railway line.

Arts and manufactures.

Cotton and silk goods are woven chiefly at Yeola, and thence sent as far as Bombay, Poona, Sātāra, and Sholāpur. The value of the annual exports from Yeola is calculated to amount to 25 lakhs. The silk industry at this place supports 4,000 families. Under the Muhammadans and Marāthās it was a monopoly, which was set aside by a decision of the Bombay High Court in 1864. Since then many outsiders have taken to silk-weaving. Gold and silver thread is also made. Mālegaon contains nearly 3,000 looms; but the product is of inferior quality. Sinnar and Vinchūr produce a little cotton cloth of various kinds and colours for local consumption. Copper, brass, and silver vessels are largely manufactured at Nāsik town, and thence sent to Bombay, Poona, and other places. The metal-work of Nāsik, especially in brass, is held to be very superior in make and polish. Besides the railway workshop, there are four ginning factories employing over 750 hands.

Commerce.

The principal articles of export are grain, oilseeds, molasses, cotton cloth and silk goods, *san*-hemp, copper, brass and silver ware. A great quantity of grain, chiefly wheat, is bought up by agents of Bombay firms, at Lāsalgaon, on the railway, 146 miles from Bombay, where there is a permanent market. There is also a considerable export of garden produce, onions, garlic, and betel-leaf. The chief imports are raw silk, cotton thread, copper and brass, sugar, groceries, and salt. Before the introduction of the railway, there was (chiefly along the Bombay and Agra and the Ahmadnagar and Poona roads) a large carrying trade through the District. The Vanjāris or Lamāns, and others in whose hands this traffic rested, have suffered much by the change. Such of them as remain have taken to agriculture. The chief traffic with the interior proceeds through the ancient Thal Pass on its way to Bombay. Weekly markets are held at every town, and in many of the larger villages. Besides these weekly markets, fairs are held each year in connexion with certain temples and religious places, notably Trimbak, which partake very much of the nature of the markets, but are larger and display a greater variety of goods. They usually last for a week or a fortnight, and attract great numbers of people, some from considerable distances. The chief centres of local traffic are Igatpuri, Nāsik, Lāsalgaon, Nāndgaon, Manmād, and Yeola, on or near the railway; Pimpalgaon (Basvant), Chāndor, and Mālegaon,

on the Bombay-Agra road; and Sinnar on the Ahmadnagar-Nāsik road.

Communications. Railways and roads.

The communications of the District were improved by the opening of the north-east line of the Great Indian Peninsula Railway in 1861, and by the opening of the Dhond-Manmād State Railway in 1878. The former line enters Nāsik at Igatpuri, and on the 110 miles which pass through the District as far as Naydongri there are sixteen stations. The latter railway forms a chord-line connecting Manmād in Nāsik with Dhond in Poona District on the south-east line of the Great Indian Peninsula Railway. In 1901 the Hyderābād-Godāvari Valley Railway was opened for through traffic from Manmād to Hyderābād. It traverses a few miles of the Chāndor *tāluka* and the north of the Yeola *tāluka*. Besides the railway lines running through the District, there are 570 miles of road, of which 303 are metalled. All are maintained by the Public Works department, except 69 miles of unmetalled road in charge of the local authorities. The Bombay-Agra trunk road traverses the District; the Nizām's frontier road runs from Satāna through Mālegaon, Manmād, and Yeola to Ahmadnagar; and a third road runs to Poona through Sinnar, Nāsik, Dindori, and Kalvān. Along the 5 miles of road between Nāsik city and Nāsik Road station on the Great Indian Peninsula Railway a small tramway, opened in 1891, carries 150,000 passengers yearly.

Famines.

The great Durgā-devī famine, lasting from 1396 to 1407, is said to have wrought as much devastation in Nāsik as in the Southern Deccan, and the memory of it has never been obliterated. Famines also occurred in 1460, 1520, and 1629, but the severest of which record remains was the famine of 1791–2. Liberal remissions by the Peshwā, the prohibition of grain exportation, and the regulation of prices alleviated the misery. In 1802–4 the ravages of the Pindāris produced such scarcity that a pound of grain is said to have cost 11 annas. The scarcity of 1876–7 caused no little distress. Special measures of relief were taken, and at one period nearly 18,000 persons were employed on works, besides those relieved in villages. The total expenditure on relief during the continuance of the scarcity was about 4 lakhs. In 1896–7 the distress was mainly due to high prices of food, and did not reach the acute stage. The years 1897 and 1898, though not quite normal, gave the District good *kharīf* and fair *rabi* harvests. But before the District had time to recover from the depletion of stocks and resources occasioned by the strain of the year

1896–7, the people had to face the almost complete failure of the rains of 1899. It is estimated that the total out-turn was only about 19 per cent. of that of an ordinary year. The entire District was thus affected, though not in equal degree. As early as October, 1899, the number on relief reached 1,051. In March, 1900, it rose to 105,664, including 1,247 in receipt of gratuitous relief, and then decreased until February, 1901, when it again rose owing to the unfavourable rains of the previous year. The number gratuitously relieved reached a maximum of 12,207 in September, 1900. The District being on the outskirts of the seriously affected area, the year brought an influx of wanderers from neighbouring States. Between September, 1899, and September, 1900, the number of deaths exceeded the normal by 31,890, and the death-rate per 1,000 exceeded the mean death-rate for the ten previous years by 38. The total cost of relief measures, including remissions of land revenue (11·8 lakhs), amounted to 45 lakhs. Advances to cultivators exceeded 10 lakhs.

Partial inundations frequently occur, and the flood of 1872, when the Godāvari at Nāsik town rose 21 feet above its ordinary level, caused great damage. In 1854 and again in 1904 locusts committed serious ravages.

District subdivisions and staff. The administration of the District is entrusted to a Collector and three Assistants, of whom two are Covenanted Civilians. The District is divided into the 12 *tālukas* of NĀSIK, SINNAR, IGATPURI, DINDORI, NIPHĀD, CHĀNDOR, YEOLA, NĀNDGAON, MĀLEGAON, BĀGLĀN, KALVĀN, and PEINT. The Collector is also Political Agent of the Surgāna State.

Civil and criminal justice. Until recent years Nāsik was included in the jurisdiction of the Judge of Thāna. It has now a District and Sessions Judge, assisted for civil business by seven Subordinate Judges, including a Joint Subordinate Judge at Nāsik town. There are 35 officers to administer criminal justice in the District. The commonest forms of crime are housebreaking and theft.

Land revenue administration. The British possessions in Nāsik have, since 1818, been enlarged by the cession of a few villages by Holkar in exchange for others near Indore, and by the lapse of the possessions of the Begam of Peint and of the Rājā Bahādur of Mālegaon. In 1818 the Nāsik territory was placed partly under Khāndesh and partly under Ahmadnagar. The portion allotted to Ahmadnagar was made into a sub-collectorate in 1837; and in 1869 the other portion was added, and the whole was constituted a separate District. At first the old system of management was continued, but the practice of farming the revenue was

abolished. Crop rates were changed into acre rates, and for a few years there was considerable prosperity; but with a decline in prices, the poverty of the people became noticeable. Subsequently, between 1840 and 1876, the survey was introduced in the plain country of the Nāsik sub-collectorate, and the revenue was reduced by nearly one-half. In the hilly country to the west the assessment on 'dry-crop' land was fixed at a lump sum, and was made recoverable from each entire village for a period of five years, a plan which proved to be most successful. The portion of the District transferred from Khāndesh was brought under survey in 1868. The effect of the survey in Nāsik was to disclose a great increase in the occupied area; and as in these parts the rates were revised on the expiry of the first guarantee, the revenue increased 53 per cent. above the amount collected in the period before the survey. The revision survey settlement was commenced in 1872. The new survey found an excess in the cultivated area of 4 per cent. in five *tālukas* for which details are available. The average assessment per acre of 'dry' land is 10 annas, on rice land Rs. 2-3, and of garden land Rs. 4-7 for *patsthal* (land watered from a channel), and R. 1 for *motsthal* (land watered from a well).

Collections on account of land revenue and revenue from all sources are shown in the following table, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	15,67	17,86	17,79	21,61
Total revenue . .	21,60	24,41	24,44	29,25

Munici-palities and local boards.

Outside the six municipalities of NĀSIK, YEOLA, SINNAR, MĀLEGAON, IGATPURI, and TRIMBAK, the local affairs of the District are managed by the District board and twelve *tāluka* boards. The total income of the municipalities averages $1\frac{3}{4}$ lakhs. The receipts of the local boards in 1903-4 were Rs. 2,09,000, the principal source of income being the land cess. The expenditure amounted to $1\frac{1}{2}$ lakhs, including Rs. 42,000 spent upon roads and buildings.

Police and jails.

The District Superintendent has general control over the police, aided by an Assistant and two inspectors. There are 21 police stations; and the total number of police in 1904 was 796: namely, 14 chief constables, 171 head constables, and 611 constables. The mounted police number 9, under one *daffadār*. Besides the District jail at Nāsik town, there

are 14 subsidiary jails in the District, with accommodation for a total of 214 prisoners. The daily average number of prisoners in 1904 was 88, of whom 9 were females.

Education.

Compared with other Districts, education is backward in Nāsik, which stood eighteenth among the 24 Districts of the Presidency in 1901 as regards the literacy of its population. The Census returned 4·3 of the population (8·2 males and 0·4 females) as able to read and write. Education, however, has made progress of late years. In 1855–6 there were only 17 schools in the District with 1,268 pupils. In 1881 there were 208 schools and 10,770 pupils. The number of pupils rose to 17,993 in 1891, but fell to 15,378 in 1901. In 1903–4 there were 305 public schools with 14,914 pupils, including 1,841 girls, besides 16 private schools with 283 pupils. Of 305 schools classed as public, one is a high school, 13 middle, and 291 primary. One school is managed by Government, 219 by the local boards, 36 by the municipal boards, 39 are aided and 10 unaided. The total expenditure on education in 1903–4 was about 1½ lakhs, of which Rs. 23,000 was contributed by Local funds and Rs. 18,000 by fees. Of the total, 73 per cent. was devoted to primary schools.

Hospitals and dispensaries.

Besides one hospital and 12 dispensaries, there are 4 private medical institutions in the District with accommodation for 128 in-patients. In 1904 the number of patients treated was 135,782, of whom 944 were in-patients, and 2,794 operations were performed. The total expenditure on the hospital and dispensaries was Rs. 23,000, of which Rs. 13,000 was met from Local and municipal funds.

Vaccination.

The number of persons successfully vaccinated in 1903–4 was 21,149, representing a proportion of 26 per 1,000 of population, which exceeds the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. xiv (1883).]

Bāglān Tāluka (or Satāna).—*Tāluka* of Nāsik District, Bombay, lying between 20° 26′ and 20° 53′ N. and 73° 51′ and 74° 24′ E., with an area of 601 square miles. There are 156 villages, but no town. The head-quarters are at Satāna. The population in 1901 was 64,645, compared with 65,562 in 1891. The density, 108 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was 1·8 lakhs, and for cesses Rs. 12,000. The chief river is the Mosam. Bāglān is noted for its garden tillage. The western portion of the *tāluka* is marked by steep and narrow ridges, running nearly east and west, which are usually crowned by perpendicular ledges of rock. The

summits are in some places fortified. Between the ridges lie narrow valleys seamed by the beds of torrents. To the east and south the country is more open and level, with sparse isolated groups of flat-topped hills. Even in the level parts much of the land is covered only with brushwood. The climate, especially in the west, is malarious after the rains; but at other seasons it is healthy and cool. The annual rainfall averages about 20 inches. In 1875 Satāna, with its two petty subdivisons or *pethas* of Jaikhedan and Abhona, was divided into two *tālukas*—Bāglān and Kalvān.

Mālegaon Tāluka.—*Tāluka* of Nāsik District, Bombay, lying between 20° 20′ and 20° 53′ N. and 74° 18′ and 74° 49′ E., with an area of 777 square miles. It contains one town, MĀLEGAON (population, 19,054), the head-quarters; and 146 villages. The population in 1901 was 96,707, compared with 86,243 in 1891. The density, 124 persons per square mile, is below the District average. The demand for land revenue in 1903–4 was 2·5 lakhs, and for cesses Rs. 17,000. Mālegaon is hilly in the north; but in the south, except for a few small hills, it is flat and treeless. Three ranges run through the *tāluka*, and are crossed by numerous cart-tracks into Khāndesh and the adjoining *tāluka*, the most southerly range being traversed by a section of the Bombay-Agra trunk road. The *tāluka* is healthy and well watered. The chief rivers are the Girnā with its tributaries in the centre, and the Bori in the north. The Girnā passes close to Mālegaon town. The annual rainfall averages 21 inches.

Kalvān.—North-western *tāluka* of Nāsik District, Bombay, lying between 20° 21′ and 20° 42′ N. and 73° 40′ and 74° 20′ E., with an area of 494 square miles. There are 188 villages, but no town. The population in 1901 was 53,616, compared with 60,417 in 1891. The density, 109 persons per square mile, is much below the District average. The head-quarters are at Kalvān. The demand for land revenue in 1903–4 was Rs. 91,000, and for cesses Rs. 6,000. The west is covered with steep bare hills; towards the east the country, though flatter and more fertile, is divided by a spur running south-east from the Western Ghāts; in the south rises the high and rugged Saptashring range, with its lower slopes fringed with teak. The annual rainfall averages 25 inches.

Peint.—Formerly a Native State, and now a *tāluka* of Nāsik District, Bombay, lying between 20° 1′ and 20° 32′ N. and 73° 15′ and 73° 39′ E., with an area of 432 square miles. There are 227 villages, but no town. The head-quarters are

at Peint. The population in 1901 was 53,392, compared with 59,601 in 1891. The density, 124 persons per square mile, is below the District average. The demand for land revenue in 1903–4 was Rs. 37,000, and for cesses Rs. 2,500. In both climate and appearance the *tāluka* resembles the Konkan. A maze of hill and valley, except for some rice-fields and patches of rough hill-side cultivation, Peint is covered over its whole area with timber, brushwood, and grass. Towards the north, a prominent range of hills passing westwards at right angles to the main line of the Western Ghāts gives a distinct character to the landscape. But over the rest of the country ranges of small hills starting up on all sides crowd together in the wildest confusion, with a general south-westerly direction, to within 20 miles of the sea-coast, and divide the valleys of the Damān and Pār rivers. The heavy rainfall, which averages 87 inches annually, the thick forest vegetation, great variations of temperature, and a certain heaviness of the atmosphere combine to make the tract unhealthy. The prevailing diseases are fever and ague. The population consists almost entirely of forest and hill tribes, nominally Hindus, poor and ignorant, unsettled in their habits, and much given to the use of intoxicating liquor. Their language is a corrupt Marāthī, with a large mixture of Gujarātī words. A large part of Peint is well suited for grazing, and considerable numbers of cattle and sheep are exported. The chief products are timber of various kinds (including bamboos), rice, *nāchni*, oilseeds, beeswax, honey, stag-horn, and hides.

The ruling family, by descent Rājputs of the Puār tribe, adopted many generations back the family name of Dalvi. A branch of the family embraced Islām in the time of Aurangzeb. During the Marāthā supremacy the Peint estates were for a long period placed under attachment by the Peshwās. In reward for services rendered in 1818, the family were reinstated in their former position by the British Government. The last chief, Abdul Momin *alias* Lakshadir Dalpat Rao III, died in 1837, leaving only a legitimate daughter, Begam Nūr Jahān. The State was placed under British management on the death of the last male chief, but the Begam was allowed a life pension of Rs. 6,000 a year, in addition to one-third of the surplus revenues of the State. On her death in 1878, Peint finally lapsed to the British Government. Harsul, the former place of residence of the Begam, is situated in 20° 9′ N. and 73° 30′ E.

Dindori.—*Tāluka* of Nāsik District, Bombay, lying between

20° 3′ and 20° 27′ N. and 73° 35′ and 74° 1′ E., with an area of 532 square miles. It contains 126 villages, but no town. The head-quarters are at Dindori. The population in 1901 was 66,401, compared with 82,626 in 1891. The density, 125 persons per square mile, is below the District average. The demand for land revenue in 1903–4 was 1·5 lakhs, and for cesses Rs. 10,000. Most of the *tāluka* is hilly. In the north and west there are only a few cart-tracks, and travelling is difficult. A fair road leads to Bulsār through the Sāval pass, and to Kalvān through the Avian pass. The rainfall is abundant, and the climate in April and May healthy, but in other months malarious. The main stream is the Kādva, used as well as the Bāngangā for irrigation.

Chāndor Tāluka (or Chāndvad).—Central *tāluka* of Nāsik District, Bombay, lying between 20° 9′ and 20° 24′ N. and 73° 56′ and 74° 29′ E., with an area of 377 square miles. There are two towns, MANMĀD (population, 7,113) and CHĀNDOR (5,374), the head-quarters; and 107 villages. The population in 1901 was 55,968, compared with 51,529 in 1891. The density, 148 persons per square mile, is slightly above the District average. The demand for land revenue in 1903–4 was 1·1 lakhs, and for cesses Rs. 8,000. Except in the eastern corner, which is roughened by bare hills and which drains east to the Girnā, Chāndor is a waving plain, sloping gently down to the Godāvari. The Chāndor range constitutes the northern boundary. In the centre and south the soil is a deep, rich, black alluvium, yielding heavy crops of wheat and gram. In other parts the soil is poor and shallow. The *tāluka* is well provided with roads. The cultivators are generally in debt, but some villages show signs of material comfort.

Nāndgaon Tāluka.—South-easternmost *tāluka* of Nāsik District, Bombay, lying between 20° 9′ and 20° 31′ N. and 74° 27′ and 74° 56′ E., with an area of 435 square miles. It contains one town, NĀNDGAON (population, 6,271), the head-quarters; and 88 villages. The population in 1901 was 37,691, compared with 33,652 in 1891. It is the most thinly populated *tāluka* in the District, with a density of only 87 persons per square mile. The demand for land revenue in 1903–4 was Rs. 81,000, and for cesses Rs. 5,000. The north and west are rich and level, but the south and east are furrowed by ravines and deep stream beds. The eastern half is thickly covered with *anjan* trees; the western half is open, with a sparse growth of bushes. The climate is dry and healthy; and the

water-supply is abundant, the chief rivers being the Pānjan and Maniād.

Nāsik Tāluka.—*Tāluka* of Nāsik District, Bombay, lying between 19° 48′ and 20° 7′ N. and 73° 25′ and 73° 58′ E., with an area of 470 square miles. It contains 3 towns, NĀSIK (population, 21,490), the head-quarters, being the largest; and 135 villages. The population in 1901 was 96,872, compared with 103,005 in 1891. The density, 206 persons per square mile, is much above the District average. The demand for land revenue in 1903–4 was 1·4 lakhs, and for cesses Rs. 11,000. The west of the *tāluka* is hilly, and there is a small level tract in the east, but the general character is undulating. The soil is generally poor. The water-supply, except near the Western Ghāts, is good. The climate is on the whole healthy.

Niphād.—*Tāluka* of Nāsik District, Bombay, lying between 19° 55′ and 20° 14′ N. and 73° 54′ and 74° 20′ E., with an area of 415 square miles. It contains 119 villages, but no town. Niphād is the head-quarters. The population in 1901 was 92,791, compared with 92,368 in 1891. This is the most thickly populated part of the District, with a density of 223 persons per square mile. The demand for land revenue in 1903–4 was 2·4 lakhs, and for cesses Rs. 19,000. The *tāluka* is an undulating plain of deep black soil, yielding rich crops of wheat and gram. The climate is good, but the heat in April and May is excessive. The water-supply is sufficient, the chief river being the Godāvari. The annual rainfall averages 23 inches.

Yeola Tāluka.—South-eastern *tāluka* of Nāsik District, Bombay, lying between 19° 57′ and 20° 12′ N. and 74° 16′ and 74° 44′ E., with an area of 410 square miles. It contains one town, YEOLA (population, 16,559), the head-quarters; and 119 villages. The population in 1901 was 56,584, compared with 65,812 in 1891. The density, 138 persons per square mile, is almost equal to the District average. The demand for land revenue in 1903–4 was nearly one lakh, and for cesses Rs. 8,500. Except for a few small barren hills, Yeola is generally flat; the soil is poor and stony, save in the south-west, where it is very fertile. The highest point is the hill of ANKAI in the north, which rises 3,182 feet above sea-level. The agricultural wealth of the *tāluka* is small. Water is scanty, especially in the northern villages which lie near the water-parting of the Girnā and the Godāvari. The annual rainfall averages 23 inches.

Sinnar Tāluka.—*Tāluka* of Nāsik District, Bombay, lying between 19° 38′ and 19° 58′ N. and 73° 48′ and 74° 22′ E., with an area of 514 square miles. It contains one town,

SINNAR (population, 7,230), the head-quarters; and 101 villages. The population in 1901 was 75,375, compared with 73,138 in 1891. The density, 147 persons per square mile, is slightly above the District average. The demand for land revenue in 1903-4 was 1·7 lakhs, and for cesses Rs. 12,000. Sinnar is a rather bare table-land, bounded on the south by a high range of hills which run into Ahmadnagar District. It contains soil of almost every variety. The water-supply, especially in the east and in the hilly parts to the south, is scanty. The climate is healthy. The annual rainfall averages 24 inches.

Igatpuri Tāluka.—*Tāluka* of Nāsik District, Bombay, lying between 19° 35′ and 19° 55′ N. and 73° 25′ and 73° 50′ E., with an area of 393 square miles. It contains one town, IGATPURI (population, 7,436), the head-quarters; and 127 villages. The population in 1901 was 66,462, compared with 69,543 in 1891. The density, 169 persons per square mile, is much above the District average. The demand for land revenue in 1903-4 was one lakh, and for cesses Rs. 7,000. In the north-west and in the south the country is hilly. The line of natural drainage divides it into two parts: a small section in the north and north-west that slopes west to the Vaitarna, and a larger section in the south that drains east into the Dārna. The *tāluka* is rather bare of trees except in the north-east and west, and the soil is poor and shallow. The climate is cool and healthy, the rainfall, which averages 133 inches annually, being the highest in the District. The water-supply is poor. *Nāgli* is the chief cereal grown.

Anjaneri (*Anjini*).—A flat-topped mass of hill, 4,295 feet above the sea, in the District and *tāluka* of Nāsik, Bombay, situated in 19° 57′ N. and 73° 35′ E. It is almost detached from its western neighbour Trimbak by the chief pass leading into Igatpuri, and falls eastward into the plain by a short and low chain of bare hills. The area covered by the main body of the hill is about 3 square miles, or a little more. It is 4 miles from Trimbak and about 14 from Nāsik town. At the foot of the hill, on the north-east, is a village which bears the same name. The top of the fort, where there is a small temple or shrine in honour of the presiding goddess Anjini, is reached by paths on the north-east and south-east. The former passes through an opening in the steep scarp. Remains near the top of the crevice show that when the fort was in its prime the whole of the *darwāza* or 'gate,' as the cleft is called, was paved in broad steps with stone cut out of the adjacent basalt. The main attraction of the north-eastern side of the

first plateau, where three bungalows for European residents are situated, is a charming little pond, surrounded with *jāmbul* trees on three sides. Owing to the lowness of its bank on the fourth, a magnificent view is obtained over the District spread out like a map below. In the upper cliff below the topmost plateau, just above the pond and bungalows, is a small Jain cave with a roughly cut seated Jina within. A small doorway, with figures on either side, gives access to a long veranda, off which again is the shrine. In the lower cliff is another small Jain cave with better finished sculpture. Pārasnāth flanks the doorways. The elevation above the sea, the splendid views, the comparatively shaded walks, and the accessibility from Nāsik render the hill a resort for residents of the District during the months of April and May.

Though called a fort, the hill does not, like Trimbak, bear signs of having been adapted for defence by artificial means. Raghunāth Rao, the father of the last Peshwā, was exiled to Anandveli, a small village on the Godāvari to the west of Nāsik. From thence he visited Anjaneri in the hot season and built a sort of summer palace there. At the back of the largest bungalow, in the scarp, is a small cave-temple, without any indication of its object or dedication. Just below, on a more gentle slope, rise the tiers of an amphitheatre built on the side of the hill.

Below Anjaneri are the remains of some highly finished temples which seem to have been in their present ruined state for several hundred years. They are said to date from the time of the Gauli or Shepherd kings, that is, the Deogiri Yādavas (1150–1308). The more important are Jain, two are Vaishnava, and the rest Saivite. Many images have been thrown down and broken. Among other ruins there are figures of Ganesh and the *lingam*, worshipped at the present day. One of the temples with Jain figures has a Sanskrit inscription, dated A. D. 1140, recording the grant of the income of some shops to the Jain temple by a Vānī minister of the Yādava ruler, Seunachandra III.

Ankai (or Ankai-Tankai).—Hill-fort in the Yeola *tāluka* of Nāsik District, Bombay, situated in 20° 11′ N. and 74° 27′ E., 900 feet above the plain and 3,182 above sea-level. Ankai and Tankai are twin hills, joined by a low ridge. The hill-top is surrounded by a scarp 150 to 200 feet in height, and is about a mile in circumference. There are seven lines of fortifications, and this was the strongest fort in the District. Tankai seems to have been used as a storehouse. In 1635

Ankai-Tankai was captured, with Alka-Palka, by Shāh Jahān's general the Khān-i-Khānān. The fort is mentioned (1665) by Thevenot. In the last Marāthā War Colonel McDowell's detachment came to Ankai on April 5, 1818, and captured it without firing a gun. There are three temples on the hill, all very rough and unfinished. On the south face of Tankai are seven Jain caves, richly sculptured but much defaced.

Chāndor Town (Chāndvad).—Head-quarters of the *tāluka* of the same name in Nāsik District, Bombay, situated in 20° 20′ N. and 74° 15′ E., at the foot of a range of hills varying from 4,000 to 4,500 feet in height, 40 miles north-east of Nāsik town and 14 miles north of Lāsalgaon station on the Great Indian Peninsula Railway. Population (1901), 5,374. Before the opening of the railway there was a small manufacture of copper and brass pots and ironwork. The town contains a dispensary. Chāndor is probably the Chandrādityapur of Dridhaprahār, the founder of the Chāndor Yādava dynasty (801–1073), who cleared it of robbers. In 1635 it was captured by the Mughals. It then passed to the Marāthās, but was retaken by Aurangzeb in 1665. It is said to have been greatly enlarged by Holkar in 1763, and remained until 1818 the private property of that chief, who started a mint here. In 1804 it was captured by Colonel Wallace, but was restored to Holkar until 1818, when it finally passed to the British. The Mahārājā had a large and once magnificent house in the centre of the town. The old fort of Chāndor, 3,994 feet high, on the flat summit of a hill rising immediately above the town, is nearly inaccessible, and commands an important *ghāt* or pass on the route from Khāndesh to Bombay. Here are a temple of Renuka-devī and some Jain caves. The temple is of comparatively modern construction, but contains two interesting images of wood, lying in the inner court-yard and much bedaubed with red paint. They both appear to be Roman Catholic images, one representing the Annunciation and the other St. Anna with the infant Virgin on her knee, but now bear the names of Hindu goddesses and serve as such. The Jain cave which is excavated in the cliffs of the Chāndor fort hill contains images of the Tīrthankars or Jain hierarchs, the principal figure being that of Chandraprabha with the crescent moon beneath him. There are also figures of Ganpati and Devī, and the cave is now called after the latter.

Deolāli.—Cantonment in the District and *tāluka* of Nāsik, Bombay, situated in 19° 54′ N. and 73° 50′ E. Population (1901), 2,894, including 1,827 in the cantonment. Among

the inhabitants are several families of *deshmukhs* who in former times, as headmen in their villages, had great influence over the Marāthās of the District. The village is about 4 miles south-east of Nāsik town, on the Great Indian Peninsula Railway. During the dry months it is the gathering-place of numerous grain brokers from Bombay. The cantoment is situated about 3½ miles to the south-west. The income and expenditure of the cantonment fund in 1903-4 were respectively Rs. 14,950 and Rs. 11,060. The camp affords accommodation for 5,000 men, and is in continuous occupation during the trooping season, as nearly all drafts are halted here, after disembarkation at Bombay, before proceeding farther up-country, as well as drafts on their way to England[1]. The situation is healthy, the water good, and the views of the distant ranges of hills remarkably fine.

Dhodap.—Fort in the Chāndor *tāluka* of Nāsik District, Bombay, situated in 20° 23′ N. and 74° 2′ E., on the highest hill in the Chāndor range, 4,741 feet above sea-level. The fort contains numerous caves hewn in the rock and the ruins of many buildings, the former quarters of the garrison. At the summit is a Musālman shrine known as Belpīr. The earliest mention of the fort is in 1635, when it surrendered to the Mughal general Alī Vardi Khān. Later it passed to the Peshwā, who made it the chief of the Nāsik forts. In 1768 Raghunāth Rao was defeated at Dhodap by his nephew Mādhu Rao. While in the possession of the Peshwā, it was attacked by two officers in Holkar's service and plundered. In 1818 it was surrendered to the British without a struggle.

Gālna.—Fort in the Mālegaon *tāluka* of Nāsik District, Bombay, situated in 20° 46′ N. and 74° 32′ E. It is built on a circular detached hill, with fairly flat summit affording an area of 20 or 30 acres. The top is 2,316 feet above mean sea-level, or about 800 feet above the plain, and is accessible only by a broad flight of steps cut into the northern face. These steps cross the hill from east to west, and then, reversing the line, climb again to the eastward, and pass under four gateways. The upper walls are perfect and contain magazines of various sizes in each of the bastions, which are semicircles and must have commanded the approach in every direction on the south and west, while the face of the hill being almost perpendicular for nearly 1,000 feet below the wall, the lines are as straight as the outlines of the rock allow, and have been defended by

[1] The importance of Deolāli as a trooping camp has recently (1901) been reduced.

large wall pieces, which were moved on iron pivots; many of these may still be seen on the round bastions at every 80 or 100 yards on the west and north faces. The south side of the hill is a bare scarp for many feet from the wall; and, at about two-thirds of the length from the east, there is a bastion in which are arches of Saracenic form, between the central two of which was a slab containing a Persian inscription dated 1569. There was a second slab in a niche between the battlements, fronting the north and surmounting a row of cellars furnished with moderate-sized windows and probably intended for residences. This slab contained a Devanāgari inscription dated A. D. 1580. Other antiquities include the idols of Gālneshwar Mahādeo, five cisterns, a series of rock-cut caves, and a handsome mosque. Close to the mosque are the ruins of a palace called the Rang Mahal or 'pleasure palace.' The view from Gālna is magnificent.

Gālna was an important place from the end of the fifteenth century, being held alternately by Musalmāns and Marāthās. In 1634 Muhammad Khān, the Musalmān commandant of Gālna, intended to deliver the fort to Shāhjī, who had possessed himself of Nāsik, Trimbak, Sangamner, and Junnar as far as the country of the Konkan. But after promises of imperial favour and of a great reward, Muhammad Khān delivered the fort to the representative of the emperor. In 1679 Sivajī plundered Gālna; and in the wars between the Marāthās and the Mughals, at the close of the seventeenth century, the fort more than once changed hands. It was attacked by Aurangzeb in 1704 and taken after a long siege in 1705. In December, 1804, after a slight resistance, Gālna was taken by Colonel Wallace. In March, 1818, it was evacuated by the commandant and garrison, and occupied by a company of native infantry. In 1862 it was found to be ruinous. Gālna fort seems at one time to have been used as a sanitarium for Dhūlia. There are the ruins of one or two houses on the top, and the tomb of a young European officer who is said to have committed suicide from grief at having killed an old woman while he was shooting bears. There are also seven Musalmān tombs. Immediately below and to the north-east of the fort lies the village of Gālna. It appears to have been of great size and importance, and was protected by a double line of defences, traces of which remain. The present population of the village is about 500, including some well-to-do money-lenders. For a few years after 1818 a *māmlatdār* held his office in Gālna village.

Igatpuri Town.—Head-quarters of the *tāluka* of the same name in Nāsik District, Bombay, situated in 19° 42′ E. and 73° 34′ N., on the Great Indian Peninsula Railway, 35 miles south-west of Nāsik and 85 miles from Bombay. Population (1901), 7,436. Igatpuri is a military station of the Poona division of the Western Command. It stands at the head of the Thal Pass, 1,992 feet above sea-level. Half a mile to the north-east is a reservoir. The railway station includes a locomotive workshop. Pimpri, near Igatpuri, contains the tomb of Sadr-ud-dīn, a Muhammadan saint of great local sanctity; and Tringalvādi, 3 miles to the north, has a fort, cave-temples, and a ruined shrine of Brahmadeo. Igatpuri was constituted a municipality in 1868. The municipal income during the decade ending 1901 averaged Rs. 12,000. In 1903–4 the income was Rs. 8,000. The town contains five English schools, of which one is for European and Eurasian girls; and two dispensaries, one of which belongs to the railway company.

Kulang and **Alang.**—Two blocks of precipitous flat-topped rocks, crowned by forts, on the Ahmadnagar frontier of the Igatpuri *tāluka*, Nāsik District, Bombay, about 10 miles south-east of Igatpuri station. Kulang is situated in 19° 35′ N. and 73° 38′ E., and Alang in 19° 35′ N. and 73° 40′ E. Kulang and Alang are about 2 miles distant from each other, Alang lying almost entirely in Ahmadnagar District. Their tops are inaccessible, the old way of approach having been destroyed. The two blocks are separated by the smaller mass of Mandangarh, which, like its neighbours, was rendered inaccessible by the destruction, probably in 1818, of the rough staircase leading to it through a cleft in the almost perpendicular rock. Alang can be climbed from Kulangvādi village in Nāsik, about 2 miles to the north, but with great difficulty and some danger. To the east of Alang is a steep pass known as Navrā-navri ('the Husband and Wife'), from two curious pillars of rock that jut up from the ridge dividing Nāsik and Ahmadnagar Districts. The pass is practicable for pedestrians, though difficult. No record of the builders of these forts has been traced. They were probably ceded to the Peshwā by the Mughals in 1760, along with Kavnai and other Nāsik forts. From the Peshwā they passed to the British in 1818.

Mālegaon Town.—Head-quarters of the *tāluka* of the same name in Nāsik District, Bombay, situated in 20° 33′ N. and 74° 32′ E., on the trunk road from Bombay to Agra, 154 miles north-east of Bombay and 24 miles north-east of

Manmād on the Great Indian Peninsula Railway. Population (1901), 19,054. Mālegaon was formerly a cantonment, but the troops have now been finally withdrawn. It has a municipality, established in 1863. The income during the decade ending 1901 averaged Rs. 24,000. In 1903–4 the income was Rs. 32,000. The town contains two cotton-ginning factories, about 3,000 hand-looms for cotton weaving, which employ 7,000 persons, a Subordinate Judge's court, two English schools, and a dispensary. Mālegaon was occupied by Arab troops during the Pindāri War, and its capture by Colonel McDowell in May, 1818, was attended by a loss of more than 200 of the British force. When the Arabs were dispersed after the capture of the fort, many of them were escorted to Surat and there shipped to their native country: others retired to Cutch, Kāthiāwār, and the Deccan. The fort is said to have been built in 1740 by Nārushankar, a daring Arab leader; other authorities refer its construction to an engineer from Delhi.

Manmād.—Town in the Chāndor *tāluka* of Nāsik District, Bombay, situated in 20° 15′ N. and 74° 26′ E., on the north-eastern line of the Great Indian Peninsula Railway. Population (1901), 7,113. Manmād is the junction of the Dhond-Manmād State Railway with the Great Indian Peninsula Railway, and also the starting-point of a metre-gauge railway to Hyderābād. Much cotton from Khāndesh and Mālegaon is carried by rail here. A remarkable pyramidal hill near Manmād, about 750 feet high, is notable for a tall, obelisk-like rock on its summit, at least 60 feet high, known locally as Rām-gulhni. At the back of this hill are the peaks known as ANKAI and Tankai. The town contains an English school and two dispensaries, one of which is maintained by the Great Indian Peninsula Railway.

Nāndgaon Town.—Head-quarters of the *tāluka* of the same name in Nāsik District, Bombay, situated in 20° 19′ N. and 74° 42′ E., about 60 miles north-east of Nāsik town, on the north-eastern line of the Great Indian Peninsula Railway. Population (1901), 6,271. The town contains a cotton-ginning factory, an English school, and a dispensary.

Nāsik Town.—Head-quarters of Nāsik District, Bombay, situated in 20° N. and 73° 47′ E., 5 miles north-west of Nāsik Road on the north-eastern line of the Great Indian Peninsula Railway, with which it is connected by a light tramway. Distance from Bombay, 107 miles. On account of the great number of pilgrims who visit its shrines, the population of Nāsik varies much at different times of the year. The fixed

population would seem to increase but slowly. The returns for 1850 gave a total of 21,860. In 1872 the inhabitants numbered 22,436; in 1881, 23,766; in 1891, 24,429; and in 1901, 21,490. Of the total number, 17,944 were Hindus, 3,257 Muhammadans, and 133 Jains.

Among Hindus Nāsik is considered a spot of special interest and holiness. This is due to the sanctity of the Godāvari river, and to the belief that Rāma, hero of the Rāmāyana, lived here for some time with his wife Sītā and his brother Lakshman. About 30 miles from its source, the Godāvari, flowing eastwards through a group of small hills, turns sharply to the south, and, after passing in that direction for about a mile, agains swerves suddenly towards the east. Here, on both sides of the river, but chiefly on its right or south-eastern bank, lies the town of Nāsik. Along the right bank the town stretches for about a mile, spreading over three small hills that rise abruptly from the river-side. The buildings, covering an area of about 2 square miles, are divided into two main parts—the new town to the north and the old town to the south. Though, according to tradition, a place of extreme antiquity, the old town of Nāsik is without ruins or buildings of any age, except the mosque standing on the site of the old fort. In style and appearance the houses do not differ from the new quarter, little of which is more than a hundred years old.

Pānchvati, the portion of the town on the left bank of the river, in extent about one-seventh part of the whole, is connected with the main town by the Victoria Bridge, built in 1897 at a cost of 2½ lakhs. It has several large temples and substantial dwellings, owned and inhabited chiefly by Brāhmans. Between Pānchvati and the old town the river banks are, for about 400 yards, lined with masonry walls and flights of stone steps or *ghāts*. On both sides places of worship fringe the banks, and even the bed of the stream is thickly dotted with temples and shrines. The river is split up into a series of pools or tanks (*kunds*) bearing the names of Hindu deities, of which the Rāmkund is reputed to be the holiest. Though the town is not walled, the streets opening on the river and leading to the southern and western suburbs are ornamented with gateways. The streets are for the most part narrow and crooked; and the houses, built on plinths 2 or 3 feet high, have almost all an upper floor, and most of them more than one storey. The fronts of many are rich in well-carved woodwork, and the whole place has an air of wealth and comfort not to be seen in most Deccan towns.

Though, since the misfortunes of Rāma and Sītā, Nāsik has ranked among the most sacred places of Hindu pilgrimage, its early Hindu rulers do not seem to have raised it to any position of wealth or importance. The Musalmāns made it the head-quarters of a division, and are said to have protected the town by building a fort, and to have fostered its trade, introducing the manufacture of paper and other industries. On the rise of the Marāthā power, Nāsik, chosen by the Peshwās as one of their capitals, increased in size and wealth. At first, under British government, it passed through a time of depression; but of late years the opening of railway communication and the establishment here of the head-quarters of the District have added to its wealth and prosperity.

Among the objects of interest in the neighbourhood of Nāsik are the Dasara *maidān*, about half a mile to the south-east of the city; Tapovan, with some caves and a famous shrine of Rāma, about a mile east of Pānchvati; the old settlement of Govardhan or Gangāpur, with a picturesque waterfall, 6 miles to the west; the Christian village of Shāranpur, about a mile to the north-west; the Jain Chāmbhār caves and the Pāndu Lena or Buddhist caves. These last are situated in one of three isolated hills, close to the Bombay road, which are called in the inscriptions Trirashmi. They are a group of old Buddhist caves (250 B.C. to A.D. 600), with many inscriptions of kings of the Andhra, Kshatrapa, and other dynasties. The caves are 17 in number and are of three kinds: *chaitya* or chapel caves, *layanas* or dwelling caves, and *sattras* or dining caves. Almost every cave has a cistern or two with a water-supply. The caves when first finished do not seem to have contained images. Later image-worshippers appear to have transformed them to suit the new creed. The images are chiefly of Gautama Buddha; the Bodhi-satwas, Vajrapāni and Padmapāni; and the Buddhist goddess Tārā. The inscriptions hold the first place in Western India on account of their length, preservation, and the value of the information they supply. Their contents throw light on the history of Western India between 100 B.C. and A.D. 100, giving many names of countries, mountains, rivers, towns, and villages. Chāmbhār Lena, or the Chāmbhār caves, are cut in a hill 600 feet above the plain, about 5 miles north of Nāsik. They are Jain caves of no great age or merit. In 1870 the Jain community of Nāsik, comprising some wealthy Mārwāri and Gujarāti bankers and cloth-dealers, built a wall near the caves, a flight of steps, a cistern at the foot of the hill, and a large resthouse

in Mhasrul village which lies close by. The caves are about 450 feet from the base of the hill and face south-west. The upper part of the ascent is by a stair of roughly dressed stone, containing 173 steps of varying heights and with side parapets. [For a description of these caves see *Bombay Gazetteer*, vol. xvi, pp. 541–639 and 426–8.]

The municipality was established in 1864, and raised to the position of a city municipality in 1874. The income during the decade ending 1901 averaged Rs. 85,000. In 1903–4 the income was Rs. 73,000, chiefly drawn from octroi, a house-tax, a sanitary cess, and tolls, together with a tax on pilgrims. The Government high school has 220 pupils, and there is a good public library. Besides the chief revenue and judicial offices, the town contains two Subordinate Judges' courts, two hospitals (including the Bai Dhankorabai Hospital for females), and a dispensary in Pānchvati. The climate is healthy and pleasant.

The industries of Nāsik maintain something of their former importance, although, owing to the competition of machinery, the manufacture of paper has greatly declined. Neither wool nor silk is woven here; but cotton hand-loom weaving is still carried on with success, and in brass- and copper-work Nāsik ranks first among the towns of the Bombay Presidency. The cotton-weavers earn about 4 to 5 annas a day for twenty days in the month; women assist and earn 1 to 2 annas a day. The old and new palaces of the Peshwā accommodate the Collector's Court and the municipal and other public offices.

Saptashring ('the seven-horned,' otherwise, but wrongly, called Chattar-singh or 'the four-peaked').—One of the highest points in the Chāndor range, Nāsik District, Bombay, situated in 20° 23′ N. and 73° 55′ E., 4,659 feet above sea-level. It rises about the centre of the range, 15 miles north of Dindori. The highest point towers 900 feet above the plateau, and the rock is perpendicular on all sides but one, where it has crumbled away and grass has grown in the crevices. The rock has more peaks than one, but it seems to have no claim to the title 'seven-horned.' The hill may be climbed from three sides: on the north by a good but steep bridle-road; on the east by a very steep sixty-step path, formerly the only road used by pilgrims, but now abandoned; and on the south by a steep footpath for part of the way which ends in a flight of 350 steps carved in the face of the rock. This last is the road now commonly used by the pilgrims and other visitors. On the steps figures of Rāma, Hanumān, Rādha, and Krishna,

and in one or two places a tortoise, are carved at intervals. These steps were made in 1768–99 by three brothers, Konher, Rudrājī, and Krishnājī of Nāsik. At intervals five inscriptions have been carved on and near the steps. One of the inscriptions is in Sanskrit, the others in Marāthī. They give the names of the three brothers and of Girmājī their father. At the foot of the steps the three brothers built a temple of Devī and a resthouse, and at the top a temple of Ganpati and a pond called Rāmtīrth. These steps lead to the plateau, and from the plateau a farther flight of 472 steps leads to the shrine of Saptashringanivāsini Devī. These steps to the upper hill-top were built about 1710, before the lower steps, by Umā Bai, wife of Khande Rao Dābhāde, the hereditary commander-in-chief of the Marāthā army.

The shrine of the goddess, known as Mahishāsur Mardini or Saptashringanivāsini, is in a cave at the base of a sheer scarp, the summit of which is the highest point of the hill. Something like a portico was added to the shrine of the goddess at the beginning of the eighteenth century by the Marāthā commander-in-chief, and the present plain structure has been recently built by the chief of Vinchūr. At the foot of the steps leading to the shrine is a small stone reservoir dedicated to Siva and called Sivālya-tīrth, which is said to have been built by Umā Bai. On one side of the pond stands a Hemādpanti temple of Siddheshwar Mahādeo, mostly in ruins but with the dome still standing, with some rather elaborate stone-carving. Under the dome stands the *lingam*, and outside in front of it a carved bull. Not far from the bathing-place is a precipice known as the Sit Kade, which overhangs the valley about 1,200 feet. From this rock human sacrifices are said to have been formerly hurled; a kid is now the usual victim.

A large fair lasting for a week, and attended by about 15,000 pilgrims, is held on the full moon of Chaitra (April). On the occasion of the fair the steps leading to the shrine are crowded with the sick and maimed, who are carried up the hill in hopes of a cure. Barren women also go in numbers to make vows and gain the gift of a child. Like the top of Mahālakshmī in Dāhānu, the top of Saptashring is said to be inaccessible to ordinary mortals. The headman of the village of Burigaon alone climbs up on the April full moon, and next morning at sunrise is seen planting a flag. How he climbs and how he gets down is a mystery, any attempt to pry into which, says the tradition, is attended by loss of sight.

Sinnar Town.—Head-quarters of the *tāluka* of the same

name in Nāsik District, Bombay, situated in 19° 50′ N. and 74° E., on the Nāsik and Poona road. Population (1901), 7,230. It has been a municipal town since 1860, with an average income during the decade ending 1901 of Rs. 7,000. In 1903–4 the income was Rs. 8,000. A large portion of the land around the town is irrigated, producing rich crops of sugarcane, plantains, betel-leaf, and rice. Except 200 cotton and 50 silk looms, chiefly for weaving robes or *sārīs*, there is no trade or manufacture. Sinnar is said to have been founded about seven hundred years ago by a Gauli Rājā, whose son, Rao Govind, built the handsome temple of Gondeshwar or Govindeshwar outside the town, at a cost of 2 lakhs. It is the largest and best-preserved Hemādpanti temple in the Deccan. The town was at one time the head-quarters of the local government under the Mughal emperors. The earliest historical mention of Sinnar appears to be as Sindiner in a copperplate of 1069. It is almost invariably called Sindar by the peasantry. On the north-west of the town is an interesting and exquisitely carved little temple of Aieshwara in Chālukyan style. The town contains a Subordinate Judge's court, an English school, and a dispensary.

Trimbak (more correctly, *Triambak*, 'the three-eyed,' a name of Mahādeo).—Town in the District and *tāluka* of Nāsik, Bombay, situated in 19° 54′ N. and 73° 33′ E., 20 miles south-west of Nāsik town. Population (1901), 3,321. Trimbak fort, which is 4,248 feet above the sea, and about 1,800 above the town, is on a scarp so high and precipitous as to be practically impregnable. The hill is 10 miles round the base and about 4 miles round the top. The scarp, which varies in height from 200 to 400 feet of perpendicular rock, surrounds the hill in every part, leaving only two gateways. The chief gateway through which the garrison received their stores and provisions is on the south. The north gateway is only a single gate, the passage to which is by narrow steps cut out of the rock, and wide enough for only one person at a time. Besides the gateways there are a few towers and works on different parts of the hill, but their position does not seem to have been chosen with a view to increase the strength of the fortress. In 1857 the Brāhmans of Trimbak instigated a party of Bhīls and Thākurs to attack the Trimbak treasury on the night of December 5. Trimbak is a place of Hindu pilgrimage, and, besides being visited by all the pilgrims who go to Nāsik, has a special fair in honour of Trimbakeshwar Mahādeo, held when the planet Jupiter enters the sign Leo, which event happens once every

twelve years. The festival held in September, 1872, was attended by thousands of pilgrims from all parts of India. The municipality, which was established in 1866, had an average income during the decade ending 1901 of Rs. 6,100. In 1903-4 the income was Rs. 8,800, of which Rs. 3,500 was derived from a pilgrim tax. The town contains a dispensary.

Vinchūr.—*Saranjām* estate in Nāsik District, Bombay. It formerly consisted of 45 villages in Nāsik District, 6 villages in Ahmadnagar, and 2 in Poona. In 1892 half the estate, including Yeola, lapsed to Government, and it now contains 26 villages, all in Nāsik District. Population (1901), about 10,700. Rental, about Rs. 37,000. Vinchūr was granted as a *saranjām* or military estate to Vithal Sivdeo, an ancestor of the present chief, who distinguished himself at the capture of Ahmadābād by the Marāthās in 1755. The chief ranks as a first-class Sardār of the Deccan. He settles without appeal such civil suits as arise among the people of his estate, and in criminal matters has the power of a first-class magistrate. His residence is at Vinchūr, situated in 20° 6′ N. and 74° 14′ E., 4 miles south-west of Lāsalgaon, on the north-east line of the Great Indian Peninsula Railway. Population (1901), 4,839. Vinchūr is surrounded by a mud wall in fair repair.

Yeola Town.—Head-quarters of the *tāluka* of the same name in Nāsik District, Bombay, situated in 20° 3′ N. and 74° 30′ E., on the Dhond-Manmād chord-line, 13 miles south of Manmād station, on the north-east section of the Great Indian Peninsula Railway. Population (1901), 16,559. The municipality, established in 1858, had an average income during the decade ending 1901 of Rs. 45,000. In 1903-4 the income was Rs. 43,500, including proceeds of sale of Government securities (Rs. 9,400) and receipts from octroi (Rs. 12,000). Yeola owes its importance to its trade in the silk and cotton goods woven here, and also to its manufacture of gold and silver brocade. The silk looms number 600, employ 1,800 persons, and produce annually fabrics valued at 6 lakhs. Cotton looms number 3,000, employ 7,000 persons, and produce annually cloth valued at 18 lakhs. The manufacture of gold wire gives employment to 500 persons, and is valued annually at 1 lakh. Including the suburbs of Nagda and Baltegaon, these industries employ nearly 10,000 people. At the time of its foundation, Yeola was under the emperor of Delhi; subsequently it passed into the hands of the Rājās of Sātāra, and then of the Peshwās. Mādhu Rao Peshwā finally gave it in grant with numerous other villages to Vithal,

the ancestor of the present chief of Vinchūr. It is surrounded by a dilapidated mud wall. It contains a Subordinate Judge's court, an English school, and a dispensary.

Boundaries, configuration, and hill and river systems.

Poona District (*Puna*).—District in the Central Division of the Bombay Presidency, lying between 17° 54′ and 19° 24′ N. and 73° 19′ and 75° 10′ E., with an area of 5,349 square miles. It is bounded on the north by the District of Ahmadnagar; on the east by Ahmadnagar and Sholāpur; on the south by the Nīra river, separating it from Sātāra and the estate of the chief of Phaltan; and on the west by Kolāba. Two isolated blocks of the Bhor State, one in the west and the other in the south, are included within the limits of Poona District.

Towards the west the country is undulating and intersected by numerous spurs of the Western Ghāts, which break off in a south-easterly direction, becoming lower as they pass eastwards, and in the end sinking to the general level of the plain. On the extreme western border the land is so rugged and cut up by valleys and ravines that on the slopes and sides of the hills a system of spade tillage takes the place of ordinary cultivation by ploughs and bullocks. Along the western border of the District the Western Ghāts form a barrier inaccessible, except by a few difficult passes or *ghāts*. Of these, the Borghāt, traversed by both a road and a railway, is the only line fitted for wheeled vehicles. The ridges, which form the main line of the mountain, have the flat tops and steep sides common to basaltic hills. Within the limits of the District not a few of the hills have had their sides hewn into rock temples, or their summits crowned with fortresses. Many streams rise in the Western Ghāts, and flow eastwards, until they join the BHĪMA river, which passes through the District from north-west to south-east. Its main tributaries are, on the left the Vel and Ghod, and on the right the Bhāma, Indrāyani, Mulā, and Nīra. The water of the rivers is good for all purposes, and all of them are sources of supply to many villages along their banks. The District is well supplied with water from six artificial lakes, of which the chief is the Kharakvasla lake, 10 miles south-west of Poona city, with an area of 5½ square miles.

Geology.

Almost the whole rock of Poona is stratified trap. In many parts of the hilly portion of the District the hill-tops are crowned with collars of trap resembling the walls of a fortress. Beds of basalt and amygdaloid alternate, their upper and lower planes being strikingly parallel with each other and apparently with the horizon.

Botany. Poona District, lying as it does partly on the Western Ghāts, possesses a varied flora, of the Konkan or Ghāts type on the west, passing into the Deccan type in the east. The chief plants of the Konkan type are *Clematis hedysarifolia*, *Dillenia pentagyna*, *Bocagea Dalzellii*, *Cocculus macrocarpus*, *Capparis Moonii*, *Garcinia indica*, *Thespesia*, *Lampas*, *Kydia calycina*, *Sterculia colorata*, *Erinocarpus Nimmoanus*, *Linum mysorense*, *Impatiens*, *Heynea trijuga*, *Gymnosporia Rothiana*, *Smithia*, *Desmodium*, *Mucuna*, *Careya*, *Casearia*, and *Begonia*. Of the Deccan type the following are a few familiar examples: *Clematis triloba*, *Fumaria*, *Capparis*, *Flacourtia*, *Abutilon muticum*, *Triumfetta rhomboidea*, *Tribulus terrestris*, *Ailanthus excelsa*, *Balanites Roxburghii*, *Boswellia serrata*, *Heylandia latebrosa*, *Taverniera Nummularia*, *Dichrostachys cinerea*, *Mimosa hamata*, *Acacia arabica*, *Anagallis arvensis*, and *Caralluma fimbriata*. The commonest road-side trees are the *pīpal* (*Ficus religiosa*), *vada* (*Ficus bengalensis*), *nandruk* (*Ficus retusa*), *pipri* (*Ficus Tsiela*), *umbar* (*Ficus glomerata*), *karanj*, tamarind, mango, *jāmbul* (*Eugenia Jambolana*), and *babūl*. Oranges, limes, grapes, figs, plantains, and guavas are grown, and are of good quality.

Fauna. The spread of tillage and the increase of population have greatly reduced the number of wild animals. Tigers, leopards, and bears are found only in the Western Ghāts, and even there in small numbers. The *sāmbar* and the spotted deer are rare, and bison is now unknown. The wolf is found in small numbers over the whole District. Wild hog abound in the *babūl* groves on the banks of the Bhīma and Ghod, in the western hill forests, and, since the opening of the Muthā Canal (1873), in the neighbourhood of Poona. The antelope and the Indian gazelle, and sometimes the hog deer, are found in the hills. The District is poorly supplied with game-birds. Except for quail, and on rare occasions for duck and snipe, no large bags are made in the District. Snakes are numerous but mostly harmless. The rivers and streams are fairly stocked with fish, about thirty kinds being offered for sale in the Poona market. During the rains, and still more towards their close, when the waters of the streams dwindle into chains of pools, fish are caught in nets and traps by the chief fishing classes, the Marāthā and Kolī Bhois.

Climate, temperature, and rainfall. The height of the Poona plateau (1,800 feet), its freedom from alluvial deposits, and the prevalence of westerly breezes, make its dry, invigorating air better suited to Europeans than any climate in Western India. The air is lighter, the heat

less oppressive, and the cold more bracing than in almost any other District of the Presidency. November to February form the Poona cold season, March to June the hot, and June to October the wet. During the cold season cool land winds prevail, with sea-breezes mostly after sundown. The hot winds, the chief characteristic of the hot season, are over by the middle of May. During the hot season the air is occasionally cooled by severe thunderstorms, bringing heavy rain and occasionally hail. The temperature falls to 48° in November and rises to 107° in May. The south-west monsoon begins about the middle of June and lasts till the end of September. The rainfall varies considerably in different parts of the District. In the western parts of the Junnar, Khed, Haveli, and Māval *tālukas* it is heavy and regular; in the central belt it is moderate; and in the Bhīmthadi and Indāpur *tālukas* on the east it is very irregular. At Lonauli on the Ghāts it averages over 185 inches annually. In Poona city 32 inches is the average, while farther east it does not exceed 20 inches in places.

History. In prehistoric times Poona District is said to have formed part of the *Dandakāranya* or Dandaka forest of the Rāmāyana, infested by wild men. In very early times it was crossed by important trade routes, which led to the Konkan by such passes as the Borghāt and the Nāna pass. Ample evidence on these points is to be found in the rock-cut inscriptions at Bhāja, Bedsa, Kārli, and the Nāna pass. The history of the District commences with that of the town of Junnar, 56 miles north-west of Poona, and 16 from the rock-cut steps which lead down the Nāna pass into the Konkan. A century before Christ the town was ruled by an Andhra king. In the succeeding two centuries Buddhism established itself at Junnar, and the circle of hills round the town became honeycombed with caves for the monks of this religion. At Bedsa an inscription of this period furnishes one of the earliest known notices of the Marāthās. Until 1290 no further evidence is forthcoming regarding the fortunes of the District; but it seems probable that it passed successively under the dominion of the early and Western Chālukyas (550–760), the Rāshtrakūtas (760–973), the Western Chālukyas (973–1184), and the Deogiri Yādavas. Under the latter, it was divided between petty Marāthā or Kolī hill chiefs. With the fall of the Deogiri Yādavas, Poona came under the dominion of Delhi, and Muhammad bin Tughlak marched against Kondāna, the present Sinhgarh fort, in 1340. The Bahmani dynasty incorporated Poona in its

possessions, and held it at the time of the Durgā-devī famine (1396–1407). An interesting account of Poona under the Bahmanis has been recorded by the Russian traveller Athanasius Nikitin (1468–74). The founder of the Nizām Shāhi dynasty of Ahmadnagar, Malik Ahmad, made Junnar his headquarters for a time. One of his successors conferred Poona as a *jāgīr* on Mālojī Bhonsla, the grandfather of Sivajī, who was born at Shivner fort, close to Junnar, in 1627. The emperor Shāh Jahān about this period penetrated into the Deccan and recovered for the Mughals the northern portions of the District. With the rise of Sivajī, Poona became the scene of conflict between the Marāthās and the Delhi emperors, the former holding the forts and passes in the hills and the latter the open country. To this period belongs one of Sivajī's most famous exploits, the capture of Sinhgarh. An expedition of Aurangzeb into the Deccan led to the capture and death of Sivajī's son Sambhājī, and the temporary re-establishment of the Mughals. Sambhājī's son Sāhū recovered the District from Aurangzeb, and thenceforward it remained under the rule of the Peshwās, of whom the first, Bālājī, was Sāhū's minister. For the next hundred years (1714–1817) Poona was the seat of the Peshwās, the heads of the great Marāthā confederacy. Bājī Rao Ballāl, second Peshwā, instituted the *dakshina* or money gifts to learned Brāhmans that led to the foundation of the Deccan College. His successor Bālājī Bājī Rao brought the Marāthā power to its zenith, though destined to witness, at the close of his rule, the disastrous defeat of Pānīpat (1761). The subsequent years are full of stirring events, when the Peshwās first opposed the Nizām and Haidar Alī, and subsequently allied themselves with different members of the Marāthā confederacy in the hope of raising a barrier against the advancing power of the British. In these intrigues they were ably assisted by the famous minister Nāna Farnavīs. Alternately the ally of Sindhia and Holkar, both of whom in turn plundered Poona city (1798 and 1802), Bājī Rao Peshwā was finally brought into conflict with the British owing to the murder of Gangādhar Shāstri, the minister of the Gaikwār of Baroda, whose safety they had guaranteed. In the Treaty of Poona an attempt was made by Bājī Rao Peshwā to conciliate the British power; but a subsequent resort to force led to the battle of Kirkee on November 5, 1817, and to the end of Marāthā rule in the District. After annexation the District was managed by Mr. Elphinstone, the former Resident at the court of the Peshwā. In 1826 the Rāmosis rose in revolt,

and were joined by the Kolīs from the hilly western tracts. This rising and a similar one in 1844 were quelled without much difficulty. Since then, the most notable chapter in the history of the District is connected with the disaffection that arose in Poona city in 1897 over the measures taken to check the spread of the plague. Discontent was rife, and ended in the murder of the special plague officer, Mr. Walter Rand of the Civil Service. The subsequent deportation and imprisonment of certain leading citizens, together with the establishment of a strong punitive police post, put an end to acts of violence; and the peace of the District has since remained unbroken.

The earliest historical remains are the caves of JUNNAR. Archaeology. The inscriptions in these caves and at the Nāna pass in the vicinity are of special interest, being the oldest known Brāhmanical inscriptions yet discovered. Later in date are the Buddhist caves at KĀRLI, BHĀJA, BEDSA, and Shelārwādi, probably all dating from the first and second centuries after Christ. Later Hindu dynasties have left the Saivite rock temple at Bhāmbhurda, 2 miles west of Poona, and scattered Hemādpanti remains varying from the tenth to the thirteenth century, which it is customary to attribute to the Gauli Rāj, or Deogiri Yādavas. The chief Hemādpanti remains are the Kukadeshwar temple at Pur 10 miles north-west of Junnar, the tanks of Belhe 21 miles north-east of Junnar, and Pabal 21 miles north-east of Poona; transformed mosques at Poona, Junnar, and Sāsvad; and the Ganga and Jumna rock-cut reservoirs on the top of Shivner fort in Junnar.

The number of towns and villages in the District is 1,189. The people. Its population at each of the last four enumerations was: (1872) 922,439, (1881) 901,828, (1891) 1,067,800, and (1901) 995,330. The decline in 1881 was due to the famine of 1876-7, while the decrease in 1901 is chiefly due to the famine of 1900 and to plague. In both famines the eastern portion of the District suffered severely.

The distribution of the population by *tālukas* in 1901 is shown in the table on the next page.

The chief towns are: POONA CITY, KIRKEE, JUNNAR, BĀRĀMATI, SIRŪR, LONAULI, SĀSVAD, INDĀPUR, TALEGAON-DĀBHĀDE, KHED, and ALANDI. The villages with population exceeding 5,000 are TALEGAON-DHAMDHERE, OTŪR, GHOD, MANCHAR, and PANDARE. Of the total population, 93 per cent. are Hindus, 5 per cent. Musalmāns, 10,703 Jains, and 14,484 Christians. Marāthī is the chief language, being spoken by 90 per cent. of the population.

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Junnar	591	1	158	117,753	199	+ 1	5,020
Khed	876	2	176	113,449	179	− 5	4,726
,, Ambegaon *petha*		...	66	42,826		− 2	1,372
Sirūr	601	1	78	65,992	110	− 23	3,160
Māval	385	2	162	65,176	169	− 3	3,346
Haveli	823	2	156	299,988	397	− 2	35,685
,, Mulshi *petha*		...	79	26,967		− 9	421
Purandhar	470	1	90	72,716	155	− 18	3,341
Bhīmthadi	1,036	1	78	80,814	119	+ 9	3,081
,, Dhond *petha*		...	50	42,754		− 36	3,524
Indāpur	567	1	85	66,895	118	− 6	2,130
District total	5,349	11	1,178*	995,330	186	− 7	65,806

* According to the latest returns of the Agricultural department, the number of villages is 1,205.

Castes and occupations.

The Hindu population is largely composed of Marāthās and allied castes, of which a description will be found in the article on the BOMBAY PRESIDENCY. The local Brāhman sub-caste is the Deshasth, who form 60 per cent. of the total number. Next to Deshasths in importance are the Chitpāvans or Konkanasths (14,000), a sub-caste that came from the Konkan, and rose to a position of great power in the days of the Peshwās, who themselves belonged to this sub-caste. Many Brāhmans are money-lenders, general traders, and landholders. The Marāthās of the old fighting class number 333,000, or one-third of the total population; while Marāthā Kunbīs, who are closely allied to them though socially inferior, number 98,000. An important cultivating caste is the Māli or gardeners (61,000). In the hilly western portion of the District the land is for the most part in the hands of Kolīs (46,000). Dhangars or shepherds number 42,000. Mahārs (82,000) and Māngs (22,000), the depressed classes, who probably represent primitive tribes dispossessed by the Aryans, are numerous, a few families being found in almost every village, where they occupy a hamlet apart from the houses of their better caste neighbours. The vicinity of Bombay City induces many of the labouring classes to seek work in that place during the busy season. The emigrants are chiefly drawn from the Ghāts villages, where the peasants are much involved in debt, and are known in Bombay as *ghātīs*. Rāmosis or professional watchmen (22,000), widely distributed throughout the District, once formed part of the Marāthā fighting forces. Chamārs or leather-workers number 18,000. Musalmāns (46,000) are

chiefly Shaikhs (27,000), a term loosely used to designate either converts from Hinduism or descendants of Arab invaders. In Junnar they are an indication of the former predominance of the Musalmān kingdom of Ahmadnagar. Agriculture supports 57 per cent. of the population, and industries and commerce 15 and 2 per cent. respectively.

Christian missions.

In 1901 the native Christians, who numbered about 8,000, included 3,765 Roman Catholics, 1,131 of the Anglican communion, 117 Presbyterians, and 243 Methodists. The Church of England Mission has a branch known as the Panch Houd Mission in Poona city and another small branch in the Haveli *tāluka*, which perform social, educational, and religious work among both sexes. The Church Missionary Society carries on evangelistic work in seven stations and maintains in Poona city a divinity school, where natives are trained as catechists. Closely connected with it is the Zanāna Bible Medical Mission, working among women. The Church of Scotland Presbyterian Mission, with its head-quarters in Poona cantonments, maintains a hospital in Poona city, a boarding-house, orphanage, and 23 schools, of which 11 are for girls. The United Free Church of Scotland Mission, established in 1882, has branches at Lonauli and Sāsvad; and the Methodist Episcopal Mission, established in 1873, maintains a home for Eurasian boys and girls and four boys' schools in Poona city. The American Marāthī Mission, established in 1855 at Sirūr, maintains two orphanages, and several schools for low-caste children, in which special attention is paid to industrial training. An energetic Brāhman lady, Panditā Rāma Bai, established in the Bhīmthadi *tāluka* in 1896 the undenominational Mukti Mission, which comprises a church, school, printing press, and a large boarding establishment, costing Rs. 80,000 a year and financed from Great Britain, Australia, and America. The Poona Village and Indian Mission, styled interdenominational and embracing all the Protestant sects, was established in 1895; it has three stations in the Bhor State and maintains a hospital, two orphanages, and a school. Among minor establishments are the Zanāna Training Home at Wanowri, a Boys' Christian Home at Dhond, the St. Vincent of Paul Society for the relief of the poor, and the St. Anthony's bread guild which provides clothing and rations for the destitute. The Salvation Army has branches at Sirūr and Talegaon-Dhamdhere.

General agricultural conditions.

In Poona all arable land comes under one or other of three great heads—'dry-crop' land, watered land, and rice land. The *kharīf* or early crops are brought to maturity by the rains of

the south-west monsoon; the *rabi* or spring crops depend on dews, on irrigation, and on the small cold-season showers which occasionally fall between November and March. The principal *kharīf* crops are spiked millet (*bājra*), mixed with the hardy *tur*, and *jowār*. These are sown late in May or in June, and are reaped in September and October or November. In the wet and hilly west the chief harvest is the *kharīf*, which here consists of rice and hill millets, such as *nāgli* and *vari*. The *rabi* crops are sown in October and November, and ripen in February and March. They are chiefly the cold-season Indian millets, such as *shālu*, *tāmbdi*, and *dudhmogra*, and wheat, together with gram, lentils (*masur*), *kulith*, and other pulses. As in other parts of the Deccan, the chief kinds of soil are black, red, and *barad* or stony. The black soil, found generally near rivers, is by far the richest of these. The red soil is almost always shallow, and coarser than the black. The stony soil is found on the slopes of hills. It is merely trap rock in the first stage of disintegration; but, if favoured by plentiful and frequent rains, it repays the scanty labour which its tillage requires. With four bullocks, a Kunbī can till about 60 acres of light soil. The same area of shallowish black soil requires six or eight bullocks. Eight bullocks can till 50 acres of deep black soil. Many husbandmen possess less than the proper number of cattle, and have to join with their neighbours for ploughing.

Chief agricultural statistics and principal crops.

The District is mostly *ryotwāri*, only about 15 per cent. of the total area being *inām* or *jāgīr* estates. The chief statistics of cultivation in 1903-4 are shown below, in square miles:—

Tāluka.	Total.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Junnar	592	427	11	3	96
Khed	876	593	18	4	148
Sirūr	601	493	5	7	33
Māval	385	235	1	1	86
Havlei	823	586	18	...	103
Purandhar	470	358	16	...	38
Bhīmthadi	1,036	794	53	3	113
Indāpur	567	406	24	2	93
Total	5,350*	3,892	146	20	710

* Statistics are not available for 89 square miles of this area, which is based on the latest information.

The chief crops are *bājra* (1,100 square miles) and *jowār* (885), grown almost entirely in the eastern portion of the District. *Bājra* is sown on light lands whenever the early rains

suffice. Rice occupies 110 square miles, being grown mainly in the western portion known as the Māval. Inferior hill millets, with wheat, peas, beans, and gram as second crops after rice, are grown in the Māval when the moisture is sufficient. The central belt grows a variety of products. Its cereal is *bājra*, and the chief oilseeds are niger-seeds and ground-nuts. Safflower covers 92 square miles. Wheat (126 square miles) is grown as a 'dry crop' in a considerable area in the Māval and in the central portions of the District. Of pulses, which occupy about 352 square miles, the most largely grown are gram, *tur*, *math*, *kulith*, and *mūg*. Sugar-cane is extensively grown (20 square miles in 1903-4), chiefly under irrigation. Vegetables form an important market-garden crop near Poona, as also do grapes, figs, *papayas*, guavas, oranges, and other favourite fruits. Among special crops, the grape-vine (*Vitis vinifera*) is occasionally grown in the best garden land on the border of the western belt and in the neighbourhood of Poona city. The vine is grown from cuttings, which are ready for planting in six or eight months. It begins to bear in the third year, and is in full fruit in the sixth or seventh. With care, a vine goes on bearing for sixty, or even, it is said, for a hundred years. The vine is trained on a stout upright, often a growing stump which is pruned to a pollard-like shape about five feet high; this mode is said to be most remunerative. Or a strong open trellis roof is thrown over the vineyard about six feet from the ground, and the vines are trained horizontally on it; this mode is preferred by the rich for its appearance and shade, and is said to encourage growth to a greater age. The vine yields sweet grapes from January to March, and sour grapes in August. The sour grapes are very abundant, but are not encouraged; the sweet grape is tended in every possible way, but is apt to suffer from disease. After each crop the vine is pruned, and salt, sheep's droppings, and dried fish are applied as manure to each vine after the sour crop is over. Vines are flooded once a year for five or six days, the earth being previously loosened round the roots. Blight attacks them when the buds first appear, and is removed by shaking the branches over a cloth, into which the blight falls, and is then carried to a distance and destroyed. This operation is performed three times a day until the buds are an inch long.

Agricultural improvements and advances.

The cultivation of sugar-cane and other valuable crops has greatly increased of late years, owing to the construction by Government of irrigation canals, as also has the use of new manures. English ploughs are used in a few places, and iron

sugar-cane mills are seen everywhere. The Poona Experimental Farm, which is situated about 2 miles from the city in Bopudi village, originated in a small piece of land taken for the agricultural class at the College of Science in 1879. In 1888 it was handed over to the Agricultural department, which since that date has superintended the raising of hybrids of cotton, wheat, and *jowār*, the growing of forage crops for the use of the model dairy attached to the farm, the testing of new crops, the trial of new agricultural implements, and the distribution of seed both to agriculturists and, for scientific purposes, to experimental farms at Pusa and elsewhere. The farm is used for educational purposes by the students of the College of Science, by junior civilians, and by visitors and agriculturists; and it is furnished with an increasing collection of soils, manures, seeds, fibres, botanical specimens, and indigenous and imported implements. A portion of the land, which measures 66 acres, is annually reserved for growing small plots of all important varieties of typical crops. A second farm at Mānjri, occupying about 45 acres, and 8 miles distant from Poona, is devoted to experiments in sugar-cane cultivation. Since 1894 attention has been directed to the system of manuring sugar-cane, to testing several methods of cultivation, to the acclimatization of imported varieties of cane, and to studying the most profitable methods of utilizing bone manure. Botanical experiments in cotton and wheat are also carried out. A sewage farm, on which sugar-cane, fodder, ground-nuts, maize, and sweet potatoes are grown, forms part of the Mānjri Farm. The model dairy farm at Kirkee contains 68 cows and 53 cow-buffaloes, and sells dairy produce of an annual value of about Rs. 24,000. The gardens at Ganeshkhind are maintained for botanical and experimental purposes, and are in charge of the Economic Botanist. They contain excellent mango orchards. Advances to agriculturists under the Land Improvement and Agriculturists' Loans Acts amounted during the decade ending 1904 to 21·4 lakhs. Of this sum, 11 lakhs was advanced in the three years 1899–1900, 1900–1, and 1901–2.

Cattle, ponies, &c.

The District has ten breeds of cattle, of which the *khilāri*, or herd-cattle from West Khāndesh, are the most valuable draught animals in the Deccan. Buffaloes are common in all parts and are of eleven kinds, but the best breeds are imported from Sind, Cutch, and Gujarāt. For rice-field work the Poona cultivator prefers the buffalo to the bullock, and the cow-buffaloes supply most of the milk used in the District. Poona has long been famous for its horses, and there are few villages in

east Poona without one or two brood-mares. Of eight breeds of horses the local or *deshi* variety, bred on the banks of the Bhīma and Nīra, was most esteemed by the Marāthās. The Dhangar pony, thick-set, short-legged, and strong, very unlike the ordinary village pony, is of the same breed as the Nīra pony. Horse-breeding is carried on by the Army Remount department, which maintains eight horse stallions and four pony stallions at Sirūr, Bārāmati, Dhond, and Indāpur. Donkeys are used as load-carriers by stonecutters, limeburners, potters, and washermen. Mules, chiefly cast commissariat animals, are used by charcoal-burners for carrying loads and drawing carts. Flocks of sheep are found in most large villages, and goats are common. Fowls are reared everywhere, while turkeys, geese, and ducks are found in the towns, where also many Musalmāns and some Hindus breed pigeons for amusement or profit.

Of the total cultivated area, 145·5 square miles, or 4 per cent., were irrigated in 1903–4. The areas under the various classes of irrigation sources were: Government canals, 56 square miles; private canals, 7 square miles; tanks, 6 square miles; wells, 75; and other sources, one square mile. The chief water-works made or repaired by Government are the Nīra and Muthā Canals, and the Shetphal, Mātoba, Kāsurdi, Sirsuphal, and Bhādalwādi tanks. The MUTHĀ CANALS, completed in 1878, and the reservoir from which they are fed, LAKE FIFE, command 16,800 acres; while the NĪRA CANAL, fed by LAKE WHITING, completed in 1886, commands 113,000 acres. The former supplied 7,000 and the latter 31,000 acres in 1903–4. Well-irrigation is of great importance in Indāpur and other drought-stricken parts of the east. Wells are circular, 8 to 10 feet across and 20 to 50 feet deep. Water is raised in a leathern bag. Near Poona city good crops are raised by well-irrigation for the Bombay and Poona markets, and many additional wells have been constructed out of Government loans during recent years. The District contains 22,177 wells and 27 tanks, used for irrigation purposes. Irrigation.

The forest lands may be roughly grouped into three classes: hill, river-bank, and upland Reserves. Except in the Sinhgarh range the hill Reserves, consisting of mixed evergreen woods and teak coppice, are found in the west. The evergreen woods yield little timber, but the teak coppices, chiefly on the slopes and terraces of the easterly spurs, furnish a valuable revenue. The groves found along the banks of almost all the larger rivers consist mostly of well-grown *babūl*. The third Forests.

class of forest lands, the upland or *māl* Reserves, are found in every subdivision, but chiefly in Sirūr, Bhīmthadi, and Indāpur. The chief forest trees are: the mango, the *ain*, the *nāna* and the *bondara* (*Lagerstroemia lanceolata* and *L. parvifolia*, two closely allied species), the *hedu* (*Nauclea cordifolia*), the *kalamb* (*Nauclea parvifolia*), the *asan* (*Bridelia retusa*), the *savi* (*Bombax malabaricum*), the *dhaura* (*Conocarpus latifolia*), the teak, the *jāmbul* (*Eugenia Jambolana*), the *yela* (*Terminalia belerica*), the *dhaman* (*Grewia tiliaefolia*), the myrabolam, and the bamboo. The Forest department is in charge of about 500 square miles of 'reserved' forest in the District, and the Revenue department manages 210 square miles of fodder reserves and pasture lands. In 1903-4 the forest revenue amounted to Rs. 60,000.

Mines and minerals.

Except iron, which occurs in various places as hematite associated with laterite, or as magnetic grains in stream beds, the District produces no metallic ores. The trap rock yields good building stone and road-metal almost everywhere, boulders being preferred to quarried stone. A variety of compact dark-blue basalt, capable of high polish, is worked into idols and pedestals for wooden pillars. Quartz occurs throughout the trap in various forms, either crystalline or amorphous in the form of agate, jasper, and heliotrope. Stilbite, and its associate the still finer apophylite, though less common than quartz, are by no means rare. One magnificent variety consists of large salmon-coloured crystals 2 or 3 inches long. The other mineral products are common salt, carbonate of soda, sand for mortar, and limestone.

Arts and manufactures.

The chief manufactures are silk robes, coarse cotton cloth, and blankets. The Poona cotton and silk-embroidered *pagrīs* have a widespread reputation, and the brass- and silver-work of the same place is much admired. Among other special manufactures may be mentioned toys, small clay figures carefully dressed, and ornaments, baskets, fans, &c., of *khas-khas* grass, decked with beetles' wings. The manufacture of paper by hand, formerly of some importance, has of late years practically ceased. A few Musalmān papermakers are still to be found in Junnar town.

Among the factories of the District are two cotton-spinning and weaving mills, a paper-mill, a flour-mill, and a brewery. In 1904 the cotton-mills contained 308 looms and 13,924 spindles, employed 1,069 hands, and produced 1·6 million pounds of yarn and 700,000 pounds of cloth. A Government gun-carriage factory and an arms and ammunition factory at

Poona and Kirkee employ about 2,100 hands. There are also railway workshops at Lonauli.

Of late years, except the development caused by cheap and rapid carriage of goods, there has been no marked change in the trade of the District. It is, generally speaking, small. The increased demand for raw sugar has led to a larger production. The raw sugar goes mostly to Bombay and Gujarāt. The chief exports are grain, raw sugar, cotton cloth, vegetables, fruits, brass-ware, and silk cloth. The chief imports are rice brought from Ahmadnagar and Thāna, wheat, salt, and copper and brass sheets. The chief agencies for spreading imports and gathering exports are trade centres, markets, fairs, village shops, and pedlars' packs. The leading merchants are Mārwār Vānīs, Gujarāt Vānīs, Bohrās, Pārsīs, and Brāhmans. Commerce.

Besides about 222 miles of metalled and 913 miles of unmetalled roads, 112 miles of the Great Indian Peninsula Railway traverse the District from west to east, and this section is joined at Dhond by the north to south cross connexion from Manmād. The Southern Mahratta Railway runs from Poona southwards for a distance of about 48 miles within the District, and has nine stations in that length. Metalled roads place the District in communication with Nāsik, Ahmadnagar, Sholāpur, Belgaum, Sātāra, and Kolāba Districts. With the exception of 341 miles of unmetalled roads, all the roads are maintained by the Public Works department. The chief of them are the Bombay-Poona mail road to the foot of the Borghāt, the Poona-Ahmadnagar road, the Poona-Sholāpur road, and the Poona-Nāsik road; while of roads maintained by the local authorities the chief are those from Manchar to Ambegaon, from Khed to Bhorgiri, from Sirūr to Nira Bridge, from Junnar to Belhe, and from Bārāmati to Patas. Communications. Railways and roads.

With much of its rainfall cut off by the western hills, large tracts in the east of the District have a very uncertain water-supply. During the last five hundred years there is either traditional or historical mention of at least twenty-five famines. The first was the dread calamity known as the Durgā-devī famine. Other famines are recorded in 1422, 1460 (Dāmājī-pant's), 1473, 1520, 1630, 1787, 1792, 1793, 1802–3 (ravages of Holkar's troops), 1820, 1823, 1824, 1825, 1832–8, 1844–6, 1862–7, 1876–7, 1896–7, and 1899–1902. In the year 1792–3 no rain whatever fell till October, and the price of grain rose to 8 seers for the rupee. In 1802, owing to the devastation Famine.

of the country by Holkar's troops, the price of grain is said to have risen to 4 seers for the rupee. In 1824–5 and 1845–6 failure of rain caused great scarcity. In 1866–7 more than Rs. 80,000 of land revenue was remitted, and Rs. 20,000 was spent on relief to the destitute. Poona was specially affected by the famine of 1876–7. In 1896–7 the whole District suffered. At the height of the famine in May, 1897, there were 22,223 persons and 3,345 dependents on relief works and 6,566 in receipt of gratuitous relief. The number gratuitously relieved reached a maximum of 23,998 in September and October, 1897. In 1899 the practical cessation of the rain from the middle of September onward resulted in widespread failure of crops, the Dhond *petha* suffering most. As early as December the number on relief works and of those gratuitously relieved exceeded 11,000. It advanced steadily till May, when it was 65,717, in addition to 17,236 dependents on relief works and 13,237 in receipt of gratuitous relief. The latter figure rose to 28,536 in September. The relief works were kept open till October, 1902, when the daily average attendance was about 1,000, just lowered from 2,000 in the previous month. It is calculated that over 20,000 persons died from the effects of famine and 120,000 cattle perished. Including remissions of advances to agriculturists and land revenue, more than 45 lakhs was spent in the District in the last famine. The advances made to cultivators exceeded 10 lakhs.

District subdivisions and staff.

The District is divided into eight *tālukas* as follows: Bhīmthadi, Haveli, Indāpur, Junnar, Khed, Māval, Purandhar, and Sirūr. The Collector is assisted by two Assistant Collectors and a Personal Assistant. The petty subdivisions (*pethas*) of Dhond, Ambegaon, and Mulshi are included in the Bhīmthadi, Khed, and Haveli *tālukas* respectively. The Collector is Political Agent for the Bhor State, which is included in the District for some administrative purposes.

Civil and criminal justice.

The District and Sessions Judge, who is also Agent for the Deccan Sardārs, is assisted by a Small Cause Court Judge, a Special Judge under the Dekkhan Agriculturists' Relief Act, and six Sub-Judges. There are thirty-eight officers to administer criminal justice in the District. The city of Poona forms a separate magisterial charge under a City Magistrate. There are also two benches of magistrates to assist him in criminal work. There is a Cantonment Magistrate for Poona cantonment, and another at Kirkee. The commonest forms of crime are theft and housebreaking.

The earliest revenue system of which traces remained at the beginning of British rule was the *jatha*, that is, the family estate, or the *thal*, that is, the settlement system, under which the whole arable land of each village was divided among a certain number of families. The lands occupied by each family were distinguished by the original occupant's surname, even when none of his descendants remained. These holdings were called *jathas* or family estates. The head of the family was held responsible for all land revenue due for the lands belonging to the family, and was styled *mukaddam*. In theory the leading family estate and its head were responsible for the whole rental of the village, and were bound to make good the failures of minor family estates. This responsibility, however, could not be enforced, and the Government was frequently content to accept less than the full rental. Malik Ambar's settlement was introduced between 1605 and 1626. It was based on a correct knowledge of the area of the land tilled and of the money value of the crop, coupled with a determination to limit the state demand to a small share of the actual money value of the crop. It is generally thought that, under Malik Ambar's survey, areas were fixed by an estimate or *nazar-pāhāni*. The rates were intended to be permanent and were therefore moderate. Between 1662 and 1666 a more correct measurement of the land was made; but owing to the state of the country, which had suffered from war and pestilence, Malik Ambar's system had to be discontinued. In 1664 in its stead a crop division was introduced. In 1669, when Sivajī reconquered Poona, he introduced a cash rental instead of payment in kind. The settlement was by villages, or *mauzawār*. The villages had therefore to make good a lump sum, and the villagers were left free to arrange for the recovery of the state dues on land which had fallen waste. Land deserted by its owner became the joint property of the village, which either divided it or cultivated it jointly. Under this system Sivajī's rental was uncertain, as individual property in land had a tendency to vanish, and this led to Malik Ambar's system of a fixed money rent for the whole village being restored in 1674. The rise in the price of produce greatly reduced the state share in the out-turn of the land, and to make good this loss special cesses were levied on several occasions and under various names. This system continued till 1758, when, under the rule of Peshwā Bālājī Bājī Rao, a new and very elaborate measurement and settlement were introduced. In the times of the Peshwās the government collected its revenues through

Land revenue administration.

its own agents; the maximum of the land tax was fixed and charged only on lands actually under tillage, while remissions were made in bad seasons. The revenues fluctuated according to the prosperity of the country. Between 1772 and 1800, the years of the administration of Nāna Farnavīs, the management of the Peshwā's land revenue was perhaps more efficient than at any other time. In the reign of Bājī Rao II the practice of farming the revenue for short terms to the highest bidder was introduced. The charges involved by this system aggravated the evils of its predecessor. Much hardship resulted from the exactions of these temporary revenue farmers.

The assessment introduced at the beginning of British rule, when prices were high, pressed heavily on landholders in seasons either of bad crops or of low prices. Consequently the leading features of the revenue system before 1856 were high assessment and large remissions. About 1825, when distress was acute, Mr. Pringle was appointed to survey the District and revise the assessment. His survey settlement was introduced over the whole District between 1829 and 1831. The measure proved a failure, partly from the heaviness and inequality of the assessment in a period of bad seasons and partly from the malpractices of Mr. Pringle's establishment. The defects were early foreseen and the new rates were soon discontinued. The first settlement confirmed for thirty years was introduced into the District between 1836 and 1854. About 1855 a regular revenue survey was undertaken. A revision survey was made and introduced between 1874 and 1901. This survey found an increase in the cultivable area of 6 per cent., and the settlement enhanced the total revenue from about 6 lakhs to 12 lakhs. The average assessment per acre of 'dry' land is 9 annas, of rice land Rs. 2-7, and of garden land Rs. 2.

The following table shows the collections of land revenue and of revenue from all sources, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . . .	10,30	16,60	12,75	17,88
Total revenue . . .	18,15	30,00	25,28	34,16

Municipalities and local boards.

The District has twelve municipalities: namely, POONA CITY and Poona Suburban, SĀSVAD, JEJURI, BĀRĀMATI, INDĀPUR, SIRŪR, TALEGAON-DĀBHĀDE, LONAULI, KHED, ALANDI, and JUNNAR. The total income of these municipalities averages about 4¼ lakhs. Outside the municipalities,

local affairs are managed by the District board and eight *tāluka* boards. The receipts of these in 1903-4 were Rs. 2,25,000, the chief source of their income being the local cess. The expenditure in the same year amounted to Rs. 2,09,000, including Rs. 87,000 spent on the construction and maintenance of roads and buildings.

Police and jails.

The District Superintendent of police is aided by an Assistant and 3 inspectors. In 1903-4 there were 18 police stations, with 16 chief constables, 3 European constables, 231 head constables, and 988 constables. The mounted police numbered 28, under 4 European constables and 6 *daffadārs*. The Yeraoda Central jail, intended for the confinement of all classes of prisoners, as well as for relieving District jails throughout the Presidency, is situated 3 miles north of Poona city. It has accommodation for 1,580 prisoners, and in 1904 the average daily number of prisoners was 1,452, of whom 40 were females. The present structure was built altogether by convict labour. The prisoners are employed outside the walls in gardens, and are hired out to contractors for unskilled labour. Inside the prison various industries are carried on, including weaving, carpet-making, coir-work, cane-work, and carpentry. A printing press has recently been established. There are 10 subsidiary jails and 12 lock-ups, with accommodation for 125 and 181 prisoners respectively. A reformatory school for juvenile offenders at Yeraoda is under the supervision of the Educational department.

Education.

Poona stands seventh as regards literacy among the twenty-four Districts of the Presidency. In 1901, 6.6 per cent. of the population (11.7 males and 1.5 females) could read and write. Education has made much progress of late years. In 1855-6 there were only 95 schools, with a total of 4,206 pupils in the District. In 1881 the number of pupils rose to 15,246, in 1891 to 30,370, and in 1901 was 25,963. In 1903-4 there were 411 schools with 24,801 pupils, of whom more than 4,400 were girls. These schools include 22 private schools with 417 pupils. Among the public institutions are 2 Arts colleges (the Deccan and Fergusson), one professional college (the College of Science), 14 high schools, 21 middle schools, 341 primary schools, and 10 special schools, including a training college for male and two for female teachers, one workshop, and a medical class at the Sassoon Hospital. The College of Science includes engineering classes, agricultural classes, a workshop, and a forestry class. The Deccan College

has a law class attached to it. Out of 389 public institutions, 14 are managed by Government, 201 by local boards, 50 by municipal boards, 119 schools are aided, and 5 are unaided. The total expenditure on education in 1903–4 exceeded $6\frac{1}{2}$ lakhs, of which nearly $1\frac{1}{3}$ lakhs was recovered as fees and Rs. 52,000 was contributed by local and municipal boards. Of the total, 25 per cent. was expended on primary schools.

Hospitals and dispensaries.

In 1904 the District contained 4 hospitals and 20 dispensaries, providing accommodation for 252 in-patients. About 145,000 patients, including 3,573 in-patients, were treated in these, and 5,520 operations were performed. The total expenditure, excluding the cost of two of the hospitals and five of the dispensaries which are maintained from private funds, was Rs. 1,47,165, of which Rs. 11,617 was paid from local and municipal funds. A lunatic asylum at Poona city contained 146 inmates in 1904.

Vaccination.

The number of persons successfully vaccinated in 1903–4 was 27,000, representing a proportion of 27 per 1,000 of population, which is much above the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. xviii (1885); W. W. Loch, *Historical Account of the Poona, Sātāra, and Sholāpur Districts* (1877).]

Junnar Tāluka.—*Tāluka* of Poona District, Bombay, lying between 18° 59′ and 19° 24′ N. and 73° 38′ and 74° 19′ E., with an area of 591 square miles. It contains one town, JUNNAR (population, 9,675), the head-quarters; and 158 villages, including OTUR (6,392). The population in 1901 was 117,753, compared with 115,762 in 1891. The density, 199 persons per square mile, is above the District average. The demand for land revenue in 1903–4 was 2 lakhs, and for cesses Rs. 14,000. The chief hill range is that of Harischandragarh. Junnar consists chiefly of the two valleys of the Mina and the Kukdi. A small portion in the west is composed of high hills and rugged valleys. In the east the soil is either black, of variable depth, or a poor gravel. *Bājra* is the staple crop. The climate is dry and healthy, and free from hot winds. The annual rainfall averages 30 inches.

Khed Tāluka.—*Tāluka* of Poona District, Bombay, including the petty subdivision (*petha*) of Ambegaon, and lying between 18° 37′ and 19° 13′ N. and 73° 31′ and 74° 10′ E., with an area of 876 square miles. There are two towns, KHED (population, 3,932), the head-quarters, and ALANDI (2,019); and 242 villages, including GHOD (5,720) and MANCHAR (5,300).

The population in 1901 was 156,275, compared with 162,391 in 1891. The density, 179 persons per square mile, is slightly below the District average. The demand for land revenue in 1903-4 was 2·3 lakhs, and for cesses Rs. 18,000. There are two large chains of hills, one in the north and the other in the south. The east is a series of table-lands crossed by mountains and hills, the country becoming rapidly more rugged as it approaches the Western Ghāts. Most of the soil is red or grey. The Māval or west has little 'dry-crop' tillage. Khed contains the largest forest area in the District. The climate is generally good. The annual rainfall averages about 26 inches.

Sirūr Tāluka.—*Tāluka* of Poona District, Bombay, lying between 18° 29′ and 19° 2′ N. and 74° and 74° 35′ E., with an area of 601 square miles. It contains one town, SIRŪR (population, 7,212), the head-quarters; and 78 villages, including TALEGAON-DHAMDHERE (6,468). The population in 1901 was 65,992, compared with 85,222 in 1891. The density, 110 persons per square mile, is the lowest in the District. The demand for land revenue in 1903-4 was 1·6 lakhs, and for cesses Rs. 12,000. Sirūr consists of stony uplands seamed towards the centre by rugged valleys, but towards its river boundaries sloping into more open plains. The chief features are low hills and uplands. The low hills are occasionally rugged and steep; the uplands, in some parts poor and stony, have in other parts rich tracts of good soil. In the south-east corner the country opens out with gentle undulations into a fairly level plain. It is throughout sparsely wooded. The prevailing soil is a light friable grey, freely mixed with gravel. The best upland soils are very productive, even with a comparatively scanty rainfall, which averages only 22 inches annually.

Māval.—*Tāluka* of Poona District, Bombay, lying between 18° 36′ and 18° 59′ N. and 73° 20′ and 73° 46′ E., with an area of 385 square miles. It contains two towns, LONAULI (population, 6,686) and TALEGAON-DĀBHĀDE (5,238); and 162 villages. The population in 1901 was 65,176, compared with 66,876 in 1891. The density, 169 persons per square mile, is below the District average. The demand for land revenue in 1903-4 was 1·2 lakhs, and for cesses Rs. 8,000. Three leading spurs from the Western Ghāts cross the *tāluka*. The largest passes east and west across its whole length in the south, a second penetrates to the centre, and the third forms the north-east boundary for about 20 miles. Māval is fairly wooded. The principal soils are red and grey; black soil is found only on the banks of rivers and large streams, of which the chief are the Indrāyani

and Andhra. Rice is everywhere the principal crop. The rainfall varies greatly in different parts. It is heavy close to the Ghāts and considerably lighter near the eastern boundary. Hot winds are almost unknown, and the climate is generally cooler than in the east of the District. The south-east line of the Great Indian Peninsula Railway and the Bombay road both cross the *tāluka*. The villages, along or at short distance from the road, derive considerable advantage from the sale of grass for the numerous droves of cart- and pack-bullocks that daily halt at the different stages. The head-quarters are at Wadgaon, a small village near the station of the same name on the Great Indian Peninsula Railway.

Haveli.—Head-quarters *tāluka* of Poona District, Bombay, including the petty subdivision (*petha*) of Mulshi, and lying between 18° 16′ and 18° 44′ N. and 73° 19′ and 74° 12′ E., with an area of 823 square miles. It contains 2 towns, POONA CITY (population, 153,320), the District and *tāluka* head-quarters, and KIRKEE (10,797); and 235 villages. The population in 1901 was 326,955, compared with 337,182 in 1891. The density, 397 persons per square mile, is more than double the District average. The demand for land revenue in 1903–4 was 2·2 lakhs, and for cesses Rs. 20,000. The southern boundary is a spur of the Western Ghāts, of which the hill fort of Sinhgarh is the most conspicuous feature. The flat-topped hills and terraces have usually a shallow surface of black soil strewn with stones. Owing to the proximity of the Poona market, the Haveli *tāluka* is more energetically and carefully tilled than other parts of the District. It is also well watered. The climate is usually dry and healthy. The annual rainfall averages 32 inches.

Purandhar Tāluka.—*Tāluka* of Poona District, Bombay, lying between 18° 6′ and 18° 27′ N. and 73° 51′ and 74° 19′ E., with an area of 470 square miles. It contains one town, SĀSVAD (population, 6,294), the head-quarters; and 90 villages. The population in 1901 was 72,716, compared with 89,100 in 1891. The density, 155 persons per square mile, is below the District average. The demand for land revenue in 1903–4 was 1·2 lakhs, and for cesses Rs. 9,500. The *tāluka* is for the most part a hill tract. The ranges run north-east and south-west, dividing it into two valleys, along which flow almost parallel streams. A spur of the Western Ghāts, which forms the watershed between the Bhīma and the Nīra, runs along the northern boundary. Its chief peaks are those on which stand Malhārgarh fort and the temples of Bhuleshwar and Dhavaleshwar. A branch of the

same spur fills the southern half of the *tāluka*, the only important peak being crowned by the twin forts of Purandhar and Vazīrgarh. The general level is about 2,800 feet above the sea; but the hill of Purandhar is nearly 1,700 feet higher. The Nīra, with its small feeder the Karha, and the Ganjauni are the principal streams. The Karha, from the lowness of its banks, is of great use to landholders, who hold back its water by means of dams, and raise it with lifts. The Nīra waterworks command a large area of the *tāluka*. Besides 1,038 wells for drinking purposes, about 1,677 wells are used for irrigation. The raw sugar of Purandhar is much prized for its quality, which is said to be due to the peculiar practice of keeping the cane in the ground for eighteen months. The cane is planted in May or June, and cut in November or December of the following year. The height above the sea, the unfailing water-supply, and the woody valleys combine to make Purandhar one of the pleasantest and healthiest parts of the District. The annual rainfall averages 23 inches. The western branch of the Southern Mahratta Railway traverses the *tāluka*.

Bhīmthadi.—*Tāluka* of Poona District, Bombay, including the petty subdivision (*petha*) of Dhond, lying between 18° 2′ and 18° 40′ N. and 74° 9′ and 74° 51′ E., with an area of 1,036 square miles. It contains one town, BĀRĀMATI (population, 9,407), the head-quarters; and 128 villages, including PANDARE (5,254). The population in 1901 was 123,568, compared with 140,281 in 1891. The density, 119 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was 2·5 lakhs, and for cesses Rs. 17,500. The only hill of note is that occupied by the ancient temple of Bhuleshwar. The flat hill-tops have usually a surface of shallow black soil strewn with stones. Many villages near the Bhīma and Nira rivers possess deep rich black soil. The Muthā Canals water a considerable area of the *tāluka*. The climate is dry and airy. The annual rainfall varies from 19 inches at Dhond to 23 at Bārāmati.

Indāpur Tāluka.—*Tāluka* of Poona District, Bombay, lying between 17° 54′ and 18° 20′ N. and 74° 39′ and 75° 10′ E., with an area of 567 square miles. It contains one town, INDĀPUR (population, 5,533), the head-quarters; and 85 villages. The population in 1901 was 66,895, compared with 70,986 in 1891. The density, 118 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was 1·1 lakhs, and for cesses Rs. 7,500.

The country is hilly and rugged in the north-west and centre, but towards the rivers it is open and smooth. The soils are extremely shallow and stony. As regards rainfall, Indāpur is one of the worst-placed *tālukas* in the Deccan, the annual average being only about 20 inches.

Alandi.—Town and place of Hindu pilgrimage in the Khed *tāluka* of Poona District, Bombay, situated in 18° 40′ N. and 73° 54′ E., on the Poona-Nāsik road. Population (1901), 2,019. The municipality was established in 1869, and its income during the decade ending 1901 averaged Rs. 6,100. In 1903–4 the income was Rs. 8,400, chiefly derived from a poll tax levied on the pilgrims, numbering many thousands, who resort to Jnāneshvar's shrine. Jnāneshvar was a celebrated Sādhu, born in 1271, who is said to have died at Alandi in 1300. He wrote a Marāthī treatise in verse on theology and metaphysics, based upon the *Bhagavadgītā*, performed several miracles, and is buried in an imposing tomb at Alandi. The wall on which he rode to encounter Chāngdev is still shown to pilgrims. The town contains a dispensary, a small public library, and a school with 104 boys and 5 girls.

Bārāmati.—Town in the Bhīmthadi *tāluka* of Poona District, Bombay, situated in 18° 9′ N. and 74° 34′ E., about 50 miles south-east of Poona city. Population (1901), 9,407. The municipality, which was established in 1865, had an average income during the decade ending 1901 of Rs. 14,000. In 1903–4 the income was Rs. 32,000, chiefly derived from octroi (Rs. 18,000) and tolls (Rs. 4,000). The town contains a Subordinate Judge's court, a dispensary, and two English schools, including one for girls.

Bedsa.—Village in the Māval *tāluka* of Poona District, Bombay, 5 miles south-west of Khadkāla station on the Great Indian Peninsula Railway, which gives its name to a group of caves of the first century A.D. Population (1901), 171. The caves lie in 18° 43′ N. and 73° 35′ E., in the Supati hills, which rise over Bedsa village to a height of about 300 feet above the plain, and 2,250 feet above sea-level. The two chief caves are a chapel or *chaitya* and a dwelling cave or *layana*, both of them imitating wooden buildings in style. The chapel is approached by a narrow passage 40 feet long between two blocks of rock about 18 feet high. A passage 5 feet wide has been cleared between the blocks and the front of two massive octagonal columns and two demi-columns which support the entablature at a height of about 25 feet. The verandah or porch within the pillars is nearly 12 feet wide, and 30 feet

2 inches long. Two benched cells project into it from the back corners and one from the front, with, over the door, an inscription in one line recording: 'The gift of Pushyanaka, son of Ananda Shethi, from Nāsik.' The corresponding cell in the opposite end is unfinished. Along the base and from the levels of the lintels of the cell doors upwards the porch walls are covered with the rail pattern on flat and curved surfaces, intermixed with the *chaitya* window ornaments, but without any animal or human representations. This and the entire absence of any figure of Buddha point to the early or Hināyana style of about the first century after Christ. The *dāgoba* or relic shrine has a broad fillet or rail ornament at the base and top of the cylinder, from which rises a second and shorter cylinder also surrounded above with the rail ornament. The box of this cylinder is small and is surmounted by a very heavy capital in which, out of a lotus bud, rises the wooden shaft of the umbrella. The top of the umbrella has disappeared. The relic shrine is now daubed in front with red lead and worshipped as Dharmarāj's *dhera* or resting-place. There is a well near the entrance, and about twenty paces away stands a large unfinished cell containing a cistern. Over the latter is an inscription in three lines of tolerably clear letters which records: 'The religious gift of Mahābhoja's daughter Sāmadinikā, the Mahādevī Mahārathini and wife of Apadevanaka.' This inscription is of very great interest, being one of the earliest mentions of the term Mahāratha yet discovered. A relic shrine or *dāgoba* lies a short distance from the chapel cave and also bears a short inscription.

Bhāja.—Village in the Māval *tāluka* of Poona District, Bombay, situated in 18° 44′ N. and 73° 29′ E., about 7 miles south-west of Khadkāla, and about 2 miles south of Kārli railway station. Population (1901), 366. It contains a group of eighteen early Buddhist caves of about the second and first century B.C., in the west face of the steep hill, some 400 feet above the village. Beginning from the north, the first is apparently a natural cavern 30 feet long and slightly enlarged. The next ten are plain cells. The twelfth cave forms a *chaitya* or chapel, and is, according to Dr. Burgess, of the greatest importance for the history of cave architecture. The cave is 59 feet long by about 29 feet wide, with a semicircular apse at the back, and an aisle 3 feet 5 inches wide separated from the nave by twenty-seven plain octagonal shafts 11 feet 4 inches high. The pillars rake inwards about 5 inches on each side, so that the nave is 15 feet 6 inches wide at the tops of the

pillars and 16 feet 4 inches at their bases. The *dāgoba* or relic shrine is 11 feet in diameter at the floor, and the cylinder or drum is 4 feet high. The dome is 6 feet high and the box upon it is two-storeyed, the upper box being hewn out 1 foot 7 inches square inside with a hole in the bottom 1 foot 8 inches deep and 7 inches in diameter. The upper part of the box or capital is of a separate stone and hollowed, showing clearly that it held some relic. On four of the pillars are carved in low relief seven ornaments of Buddhist symbols. On the left of the seventh pillar is a symbol formed of four tridents round a centre, which perhaps contained a fan with buds and leaves at the corners. On the eighth pillar on the right side are two flowers and what looks like a fan, and on the left side a posy of holy flowers. The roof is arched, the arch rising from a narrow ledge over the triforium 7 feet 5 inches above the tops of the pillars and 26 feet 5 inches high from the floor. The roof is ribbed inside with teak girders, the first four of which, and parts of some of the others, have given way or been pulled down. The front must have been entirely of wood, and four holes in the floor show the position of the chief uprights. There are also mortices cut in the rock showing where one of the chief cross-beams must have been placed, probably to secure the lattice-work in the upper part of the window. The front of the great arch is full of pin-holes in three rows, about 170 in all, showing beyond doubt that some wooden facing covered the whole of the front. The figures on the arch include that of a female—high up on the left, much weather-worn, with a beaded belt about the waist; two half figures looking out of a window in the projecting side to the right of the great arch, and on the same side the heads of two others in two small compartments on a level with the top of the arch.

For a full description of the remaining caves, which are also interesting, see the *Bombay Gazetteer*, vol. xviii. There are several inscriptions, but they contain no information of special interest.

Bhavsari. (*Bhosari*, also known as Bhojpur.)—Village in the Haveli *tāluka* of Poona District, Bombay, situated in 18° 37′ N. and 73° 53′ E., at the first stage on the Nāsik road, about 8 miles north of Poona city. Population (1901), 1,697. The place is remarkable for a number of large rude stones forming enclosures to the east, south, and west of the village, and numerous stone slabs bearing roughly carved figures of men fighting, cattle raids, dead men, and heavenly damsels.

As far as they have been examined, none of these stones, whether found in mounds, lines, or walls, has any writing. The discovery of pieces of bones in one of the mounds supports the view that the circles and heaps of stones and the solitary standing stones are funeral monuments. Without inscription or the discovery of further relics it is impossible to fix the age of these monuments, even within wide limits. There seems no reason to doubt that they are old, certainly older than the Musalmāns, and probably older than the Silāhāras or the Yādavas (850–1310). The absence of any signs of a mound in many cases, and the absence of relics in several of the mounds, suggest that some of these monuments are cenotaphs raised to people whose bodies were buried or burnt in some other place. The carved battle-stones show that, till Musalmān times, Bhavsari continued a favourite place for commemorating the dead; and the number of shrines to Satvai, Khandoba, Mhasoba, Chedoba, Vīr, and other spirits, seem to imply that the village is still considered to be haunted by the dead. An inscription on a rough stone attached to a wide burial-mound in Sopāra near Bassein proved that it was raised about 200 B.C. in honour of a person of the Khond tribe. Khond is the same as Gond and apparently as Kol. It survives as Kod, a surname among Kunbīs in Thāna and elsewhere, and Marāthās. So far as is known, the name does not occur in the Northern Deccan. The mention of Khonds on the Sopāra stone, and the reverence for the dead which is so marked a characteristic of the Bengal Kols and the Godāvari Kolīs, suggest that these rude monuments belong to the Kol or Kolarian underlayer or base of the Deccan population. Stone monuments like those at Bhavsari have not yet been made the subject of special search. They are found scattered over most of the Deccan.

Bhīmāshankar.—Fort in the village of Bhovargiri in the Khed *tāluka* of Poona District, Bombay, situated in 19° 4′ N. and 73° 32′ E., at the source of the Bhīma river, about 30 miles north-west of Khed, possessing a famous temple of Mahādeo, said to be one of the twelve great *lingams* of India. Bhīmāshankar is at the crest of the Western Ghāts, 3,448 feet above sea-level. Here, in a dip in the hill-top, surrounded by three or four wooded heights, is the holy source from which the Bhīma flows in a tiny stream into a cistern. Close to the cistern are two temples of Mahādeo, one old and out of repair and the other modern, commenced by the famous Poona minister Nāna Farnavīs (1764–1800) and finished by his

widow. The old temple is a plain, solid structure built of dark stone, with a vaulted roof much like the Norman crypts often found under English cathedrals and abbeys. In the hall or *mandapa* is a rough stone bull, while in the shrine a metal figure with five heads represents the god Bhīmāshankar. Hung on an iron bar supported between two strong stone pillars, to the east of the old temple, is a large bell weighing three to four hundredweight. Embossed on the face of the bell is a minute human figure, perhaps the Virgin Mary, with a Maltese cross above and the figures 1729 below, showing the year in which the bell was cast. The bell is worshipped by the people, and the cross, the human figure, and the date are painted with red pigment. According to tradition, the bell was brought from Vāsind near Kalyān in Thāna, probably from some Portuguese church or convent, about 1739, when Bassein was taken by the Marāthās. The old temple was originally much larger than it is now, as its size was greatly reduced to make room for the new temple of Nāna Farnavīs. The latter is also built of dark stone, and the spire rises in the form of a cone surmounted by a pinnacle. All round the outer wall of the lower part of the temple runs a row of small figures and gods in niches. The east front of the temple has much ornamental work. The rain dripping from the cement over the door has formed fringes of stalactites which harmonize with the fretwork, effectively combining nature and art in the decoration of the temple front. A yearly fair, attended by about 25,000 pilgrims from all parts of the Deccan and the Konkan, is held on Mahāsivrātri in February–March and lasts for two or three days.

Two legends explain the origin of the holiness of Bhīmāshankar. According to one, while Mahādeo was resting after a successful but fatiguing contest with a demon named Tripurāsur, Bhīmak, a mythic king of Oudh of the Solar line, came to do penance before the god and ask forgiveness for wounding, during a hunt, two sages in the form of a deer. Siva pardoned Bhīmak and offered to grant him any boon he desired. Bhīmak asked that the sweat which was still fresh on Siva's brow might be changed into a river for the good of mankind. According to the other legend, the place first came into repute about the middle of the fourteenth century after Christ. When cutting timber in the Bhīmāshankar valley one Bhati Rao found blood gushing out of one of the trees. Bhati Rao brought his cow to the tree and dropped her milk on the stump, and the wound healed in one night. A *lingam* of Mahādeo came out of the tree and Bhati Rao built a shrine on the spot.

Borghāt.—Pass across the Western Ghāts in Poona District, Bombay, 40 miles south-east of Bombay, and about the same distance north-west of Poona, situated in 18° 47′ N. and 73° 21′ E. The summit is 1,831 feet above the level at its base, or 2,027 feet above the sea. The south-east line of the Great Indian Peninsula Railway here climbs the Ghāts from the Konkan to the Deccan. The average gradient is 1 in 48. The total length of tunnelling is 2,535 yards. There are 8 viaducts, varying from 52 to 168 yards in length and from 45 to 139 feet in height. The total quantity of cuttings was 1,623,102 cubic yards, and of embankments 1,849,934 cubic yards. The maximum height of the embankments is 74 feet. There are 18 bridges of various spans from 7 to 30 feet, and 58 culverts of from 2 to 6 feet span. The estimated cost of the work was 60 lakhs, or an average of 4 lakhs per mile. It was completed in February, 1861, within five years from the date of its commencement.

In former times the Borghāt was considered the key of the Deccan. In 1804 General Wellesley gave Bombay greater facilities of access to the Deccan by making the Borghāt practicable for artillery, and constructed a good road from the top of the *ghāt* to Poona. A good carriage road up the *ghāt* was not, however, completed until 1830, when it was opened by Sir John Malcolm, then Governor of Bombay. 'On the 10th of November, 1830,' he wrote, 'I opened the Borghāt, which, though not quite completed, was sufficiently advanced to enable me to drive down with a party of gentlemen in several carriages. It is impossible for me to give a correct idea of this splendid work, which may be said to break down the wall between the Konkan and the Deccan. It will give facility to commerce, be of the greatest convenience to troops and travellers, and lessen the expense of European and other articles to all who reside in the Deccan.' Thirty years afterwards another Governor of Bombay, Sir Bartle Frere, at the opening of the Borghāt railway incline, which reaches by one long lift of 15½ miles the height of 1,831 feet, recalled Sir John Malcolm's words and said: 'When I first saw the *ghāt* some years later, we were very proud in Bombay of our mail-cart to Poona, the first, and at that time, I believe, the only one running in India; but it was some years later before the road was generally used for wheeled carriages. I remember that we met hardly a single cart between Khandāla and Poona; long droves of pack-bullocks had still exclusive possession of the road, and probably more carts now pass up and down the

ghāt in a week than were then to be seen on it in a whole year. But the days of mail and bullock-carts, as well as of pack-bullocks, are now drawing to a close.' Bullock-carts, however, still continue to do a fair business in spite of the completion of the railway.

Chākan.—Market village in the Khed *tāluka* of Poona District, Bombay, situated in 18° 45′ N. and 73° 32′ E., 6 miles south of Khed and 18 miles north of Poona. Population (1901), 4,197. Chākan fort is nearly square, with bastioned fronts and corner towers. A portion of the outworks is said to be the remains of a fortification made in 1295 by an Abyssinian chief. Chākan first came into notice in 1443, when Malik-ut-Tujār, the leading Bahmani noble, who was ordered by Alā-ud-dīn II (1435–58) to reduce the sea-coast or Konkan forts, fixed on Chākan as his head-quarters. From this time Chākan and Junnar continued military posts. In 1486 Malik Ahmad, the founder of the Ahmadnagar dynasty, seized the fort. In 1595 Bahādur, the tenth Ahmadnagar king, granted the fort to Mālojī Bhonsla, Sivajī's grandfather, and it thus came into Sivajī's possession. In 1662 it was captured by Shaista Khān, the Mughal general, but was restored to Sivajī by Aurangzeb in 1667. In 1818 the fort was taken without much difficulty from the Marāthās by Lieutenant-Colonel Deacon. The village contains three schools with 206 boys and 22 girls, besides a school maintained by a branch of the Church Missionary Society.

Chinchvad.—Village in the Haveli *tāluka* of Poona District, Bombay, situated in 18° 37′ N. and 73° 47′ E., about 10 miles north-west of Poona city, on the right bank of the Pauna, which falls into the Mulā below the village of Aundh, and on the Great Indian Peninsula Railway. Population (1901), 1,596. Chinchvad is famous as containing a shrine of the god Ganpati, who is said to have become incarnate in the person of a boy, named Moroba, about the middle of the seventeenth century. The boy performed many miracles, and when he died was succeeded by a series of incarnations in the same family, known as the Devs of Chinchvad. Of these, Moroba's son Chintāman was the second living god. He once assumed the form of Ganpati to satisfy the jealousy of the great Vānī poet Tukārām,' who prided himself on Vithoba's coming to dine with him. Tukārām called Chintāman by the surname of God or Dev, and this surname has passed to his descendants. Chintāman died a natural death and was succeeded by Nārāyan, the third Dev, who is reported

to have changed into a bunch of jessamine flowers a dish of beef which Aurangzeb sent him to test his godhood. Aurangzeb was so pleased with the miracle that he is said to have made an hereditary grant of eight villages to the Dev family. The last Dev drew upon himself a curse by opening the grave of Moroba, who, disturbed in his meditations, told him that the godhood would end with his son. The son died childless in 1810, and with him ended the seventh generation of the Dev family. A boy named Sakhari, a distant relation of the deceased, was set up in his place by the priesthood to preserve the valuable grants to the temple.

The Dev family live in a mansion on the river built partly by Nāna Farnavīs and partly by Hari Pant Phadke, a Marāthā general of the end of the eighteenth century. Near the palace stand two temples each sacred to one of the departed Devs. The chief temple is dedicated to Moroba. It is a low, plain building with a square hall or *mandap* and an octagonal shrine. On the wall of the inner shrine is an inscription recording the building of the temple in 1659. On the outer wall of the temple of Srī Nārāyan, the third Dev, is another inscription according to which it was finished in 1720. A yearly fair attended by about 2,000 persons is held here in honour of Ganpati on the sixth day of the dark half of the month of Mārgshīrsh (December–January), and lasts for a week. Chinchvād contains a school with 132 boys and 13 girls.

Dhond.—Head-quarters of the *petha* of the same name in the Bhīmthadi *tāluka* of Poona District, Bombay, situated in 18° 28′ N. and 74° 35′ E., on the left bank of the Bhīma, 8 miles north-east of Pātas and about 48 miles east of Poona. Population (1901), 4,476. Dhond is the junction of the Dhond-Manmād State Railway with the south-east branch of the Great Indian Peninsula Railway. The two temples in Dhond are dedicated to Bhairavdeo and Vithoba. Both are said to have been built by Mahādjī Sindhia (1761–94), to whom the village was granted. The Bhairavdeo temple is of stone with a brick superstructure. A yearly fair is held here in April. The town contains two dispensaries, one of which belongs to the Great Indian Peninsula Railway, and two schools with 388 boys and 12 girls. There is also a Christian orphanage for boys, established in 1899.

Ghod.—Village in the Khed *tāluka* of Poona District, Bombay, situated in 19° 2′ N. and 73° 53′ E., about 25 miles north of Khed town. Population (1901), 5,720. Ghod is the head-quarters of the Ambegaon *petha*, and contains an old mosque

with a Persian inscription recording that it was built about 1580 by one Mīr Muhammad. In 1839 a band of Kolīs threatened the petty divisional treasury of Ghod. Mr. Rose, Assistant Collector, gathered a force of peons and townspeople, and successfully resisted the repeated attacks of 150 insurgents who besieged them the whole night. The town contains two schools with 350 boys and 75 girls.

Indāpur Town.—Head-quarters of the *tāluka* of the same name in Poona District, Bombay, situated in 18° 7′ N. and 75° 2′ E., 84 miles south-east of Poona city. Population (1901), 5,533. A weekly market and a fair, attended by Muhammadans, is held annually in November. The municipality, established in 1865, had an average income during the decade ending 1901 of Rs. 3,900. In 1903–4 the income was Rs. 3,900. The town has a dispensary, established in 1870, and is celebrated for the manufacture of coarse cotton cloth. There are two schools, one for boys with 216 pupils, and one for girls with 36.

Jejuri.—Town in the Purandhar *tāluka* of Poona District, Bombay, situated in 18° 16′ N. and 74° 9′ E., on the Southern Mahratta Railway. Population (1901), 2,871. It is a place of Hindu pilgrimage. The municipality was established in 1868, to take charge of the sanitary arrangements during the religious fairs to which the village owes its importance. The fairs are in honour of the god Khandoba. A pilgrim tax is levied for four months, from about December to April. The average income during the decade ending 1901 was Rs. 5,000. In 1903–4 the income was Rs. 4,700. The town contains a dispensary and a school, managed by the Poona Native Institution, with 182 boys and 9 girls.

Junnar Town.—Head-quarters of the *tāluka* of the same name in Poona District, Bombay, situated in 19° 12′ N. and 73° 53′ E., 56 miles north of Poona city, and about 16 miles east of the crest of the Western Ghāts. Population (1901), 9,675. The fort of Junnar, often noticed in Marāthā annals, was built by Malik-ut-Tujār in 1436. In May, 1657, Sivajī surprised and plundered the town, carrying off about 10 lakhs in specie, besides other valuable spoil. About 1½ miles south-west of the town is the hill fort of Shivner, granted in 1599 to the grandfather of Sivajī; the latter is said to have been born here in 1627. During the turbulent times of Marāthā warfare Shivner was often taken and retaken, and once, in 1670, the forces of Sivajī himself were beaten back by its Mughal garrison. Besides fine gates and solid fortifications, it is celebrated

for its deep springs. They rise in pools of great depth, supposed to be coeval with the series of Buddhist caves which pierce the lower portion of the scarp. The chief buildings of interest in Junnar are the Jāma Masjid, five hundred years old, a mosque dating from the time of Shāh Jahān, the Afiz Bāgh, and two fine *dargāhs*. The hills surrounding the plain of Junnar are honeycombed with Buddhist caves, many of them of striking interest. Chief of these is a circular cave situated in a hill beyond Shivner. Some bear traces of fine carving, and there are a few inscriptions dating back to the first century of the Christian era. Junnar is supposed to have been a town of great importance in the days of the Western Kshatrapas. (*See* BOMBAY PRESIDENCY, History.) The municipality, which was established in 1861, had an average income during the decade ending 1901 of Rs. 8,800. In 1903-4 the income was Rs. 13,000, chiefly derived from octroi and a tax on houses and lands. Though fallen in size and importance since the time of Muhammadan rule, and by the subsequent transfer of the seat of government to Poona under the Marāthās, Junnar is still a place of considerable note. It is the chief market of the northern part of the District, and a dépôt for the grain and merchandise passing to the Konkan by the Nāna *ghāt*. It has a high school and nine other schools, attended by 824 boys and 152 girls, a dispensary, and a Subordinate Judge's court. It was formerly celebrated for the manufacture of paper, but the low rates at which the European article is now sold have almost driven native paper out of the market. A branch of the Church Missionary Society is stationed here.

Kārli (*Kārla*).—Village in the Māval *tāluka* of Poona District, Bombay, situated in 18° 45′ N. and 73° 29′ E., on the road between Bombay and Poona. Population (1901), 903. Some celebrated caves are 2½ miles from the Kārli and 5 from the Lonauli station on the Poona section of the Great Indian Peninsula Railway. The principal cave is thus described by Mr. J. Fergusson in his *History of Eastern and Indian Architecture*:—

'It is certainly the largest as well as the most complete *chaitya* cave hitherto discovered in India, and was excavated at a time when the style was in its greatest purity. In it all the architectural defects of the previous examples are removed; the pillars of the nave are quite perpendicular. The screen is ornamented with sculpture—its first appearance apparently in such a position—and the style had reached a perfection never afterwards surpassed.

'In the cave there is an inscription on the side of the porch, and another on the lion-pillar in front, which are certainly integral, and ascribe its excavation to Mahārājā Bhūti or Deva Bhūti, who, according to the Purānas, reigned 78 B.C.; and if this is so, they fix the age of this typical example beyond all cavil.

'The building resembles, to a very great extent, an early Christian church in its arrangements, consisting of a nave and side aisles, terminating in an apse or semi-dome, round which the aisle is carried. The general dimensions of the interior are 126 feet from the entrance to the back wall, by 45 feet 7 inches in width. The side aisles, however, are very much narrower than in Christian churches, the central one being 25 feet 7 inches, so that the others are only 10 feet wide, including the thickness of the pillars. As a scale for comparison, it may be mentioned that its arrangement and dimensions are very similar to those of the choir of Norwich Cathedral, or of the Abbaye aux Hommes at Caen, omitting the outer aisles in the latter building. The thickness of the piers at Norwich and Caen nearly corresponds to the breadth of the aisles in the Indian temple. In height, however, Kārli is very inferior, being only 42 feet, or perhaps 45 feet from the floor to the apex, as nearly as can be ascertained.

'Fifteen pillars on each side separate the nave from the aisles; each pillar has a tall base, an octagonal shaft, and a richly ornamented capital, on which kneel two elephants, each bearing two figures, generally a man and a woman, but sometimes two females, all very much better executed than such ornaments usually are. The seven pillars behind the "altar" are plain octagonal piers, without either base or capital, and the four under the entrance gallery differ considerably from those at the sides. The sculptures on the capitals supply the place usually occupied by frieze and cornice in Grecian architecture; and in other examples plain painted surfaces occupy the same space. Above this springs the roof, semicircular in general section but somewhat stilted at the sides, so as to make its height greater than the semi-diameter. It is ornamented even at this day by a series of wooden ribs, probably coeval with the excavation, which prove beyond the shadow of a doubt that the roof is not a copy of a masonry arch, but of some sort of timber construction which we cannot now very well understand.

'Immediately under the semi-dome of the apse, and nearly where the altar stands in Christian churches, is placed the *dāgoba*, in this instance a plain dome slightly stilted on a circular drum. As there are no ornaments on it now, and no mortices for woodwork, it probably was originally plastered and painted, or may have been adorned with hangings, which some of the sculptured representations would lead us to suppose was the usual mode of ornamenting these altars. It is surmounted by a Tee, and on this still stand the remains of an umbrella in wood, very much decayed and distorted by age.

'Opposite this is the entrance, consisting of three doorways, under a gallery exactly corresponding with our rood-loft, one leading to the centre and one to each of the side aisles; and over the gallery the whole end of the hall is open, as in all these *chaitya* halls, forming one great window, through which all the light is admitted. This great window is formed in the shape of a horseshoe, and exactly resembles those used as ornaments on the façade of this cave, as well as on those of Bhāja, Bedsa, and at Nāsik. Within the arch is a framework or centring of work standing free. This, so far as we can judge, is, like the ribs of the interior, coeval with the building; at all events, if it has been renewed, it is an exact copy of the original form, for it is found repeated in stone in all the niches of the façade, over the doorways, and generally as an ornament everywhere, and with the Buddhist "rail," copied from Sānchi, forms the most usual ornament of the style.

'The outer porch is considerably wider than the body of the building, being 52 feet wide, and is closed in front by a screen composed of two stout octagonal pillars, without either base or capital, supporting what is now a plain mass of rock, but once ornamented by a wooden gallery forming the principal ornament of the façade. Above this, a dwarf colonnade or attic of four columns between pilasters admitted light to the great window; and this again was surmounted by a wooden cornice or ornament of some sort, though we cannot now restore it, since only the mortices remain that attached it to the rock.

'In advance of this screen stands the lion-pillar, in this instance a plain shaft with thirty-two flutes, or rather faces, surmounted by a capital not unlike that at Kesariyā, but at Kārli supporting four lions instead of one; they seem almost certainly to have supported a *chakra*, or Buddhist wheel. A similar pillar probably stood on the opposite side, but it has either fallen or been taken down to make way for the little [Hindu] temple that now occupies its place.

'The absence of the wooden ornaments of the external porch, as well as our ignorance of the mode in which this temple was finished laterally, and the porch joined to the main temple, prevent us from judging what the effect of the front would have been if belonging to a free-standing building. But the proportions of such parts as remain are so good, and the effect of the whole so pleasing, that there can be little hesitation in ascribing to such a design a tolerably high rank among architectural compositions.

'Of the interior we can judge perfectly, and it certainly is as solemn and grand as any interior can well be, and the mode of lighting the most perfect—one undivided volume of light coming through a single opening overhead at a very favourable angle and falling directly on the "altar" or principal object in the building, leaving the rest in comparative obscurity. The effect is considerably heightened by the closely-set thick

columns that divide the three aisles from one another, as they suffice to prevent the boundary walls from ever being seen; and as there are no openings in the walls, the view between the pillars is practically unlimited.

'These peculiarities are found more or less developed in all the other caves of the same class in India, varying only with the age and the gradual change that took place from the more purely wooden forms of these caves to the lithic or stone architecture of the more modern ones. This is the principal test by which their relative ages can be determined, and it proves incontestably that the Kārli cave was excavated not very long after stone came to be used as a building material in India.'

Khandāla.—Sanitarium in the Māval *tāluka* of Poona District, Bombay, situated in 18° 46′ N. and 73° 22′ E., on the Western Ghāts, about 41 miles north-west of Poona city. It is a favourite retreat of the inhabitants of Bombay during the summer months. Population (1901), 2,322. A much-admired waterfall, distant about half a mile, consists in the rainy season of two cataracts, divided into an upper and a lower fall. The upper cataract has a sheer fall of 300 feet. Khandāla owes its importance entirely to the Great Indian Peninsula Railway, on which it is a station. The climate is temperate in the hot season, owing to the cool sea-breezes. There are a hotel for Europeans, a convalescent home, and a dispensary. Khandāla contains four schools with 175 boys and 65 girls, three of which are supported by missions. One is a Roman Catholic Mission school, connected with the St. Mary's College in Bombay, the second is St. Peter's Protestant High School, and the third is maintained by the All Saints' Community of Bombay. Several bungalows have been built by native merchants of Bombay, who resort hither during May and October. In the vicinity are many fine views of the Ghāt range, which runs north and south in lines of great natural beauty. Khandāla is a military sanitarium in the Poona division of the Western (Southern) Command.

Khed Town.—Head-quarters of the *tāluka* of the same name in Poona District, Bombay, situated in 18° 51′ N. and 73° 53′ E., on the left bank of the Bhīma river, 26 miles north of Poona city. Population (1901), 3,932. The town has an area of upwards of 20 square miles, within which limits are at least three places of interest from an architectural or archaeological point of view: namely, the tomb and mosque of Dilāwar Khān, an old Hindu temple of Siddheswar on the left bank of the Bhīma river, and a temple of Tukai-devī some-

centuries old a few yards to the right of the Poona-Nāsik road. The mosque is a graceful specimen of Musalmān carved stone-work. The town contains a Sub-Judge's court, a dispensary, and one school with 171 boys and 25 girls. The municipality was established in 1863. During the decade ending 1901 the average income was Rs. 3,000. In 1903–4 the income was Rs. 3,500, chiefly derived from a house tax. A branch of the Church Missionary Society, stationed here, carries on evangelistic work in the *tāluka*.

Kirkee (*Kirki* or Khadki).—Town in the Haveli *tāluka* of Poona District, Bombay, situated in 18° 34′ N. and 73° 51′ E., on the south-east branch of the Great Indian Peninsula Railway, 116 miles south-east of Bombay and 4 north-west of Poona city. Population (1901), 10,797. On November 5, 1817, the first of three battles which led to the collapse of the Marāthā power was fought near Kirkee, then a mere village. The British force under Colonel Burr was 2,800 strong, of whom 800 were Europeans. The Peshwā's force under Bāpu Gokhale numbered 18,000 horse and 8,000 foot, with an immense train of ordnance. The Peshwā Bājī Rao witnessed the battle and his own defeat from Pārbati hill, one mile south of Poona. Kirkee is the principal artillery station in the Bombay Presidency, four field batteries being quartered here. It contains an arms and ammunition factory, employing about 2,000 operatives. The average income of the cantonment fund during the decade ending 1901 was Rs. 22,000. In 1903–4 it was Rs. 28,000, and the expenditure amounted to Rs. 22,000. The town contains an English school. A branch of the Church Missionary Society, stationed here, carries on evangelistic work in the *tāluka*.

Koregaon Village.—Village in the Sirūr *tāluka* of Poona District, Bombay, situated in 18° 39′ N. and 74° 4′ E., on the right bank of the Bhīma, 16 miles north-east of Poona city. Population (1901), 689. This was the scene of the last of the three battles in the neighbourhood, which led to the collapse of the Peshwā's power, fought on January 1, 1818. Captain Staunton, on his march to strengthen Colonel Burr, arrived at Koregaon in the morning after a fatiguing night march with a detachment of 500 Bombay native infantry, 300 irregular horse, and 2 six-pounders manned by 24 Madras artillerymen. He found the whole army of the Peshwā, some 20,000 strong, encamped on the opposite bank of the Bhīma river. The Marāthā troops, mostly Arabs, were immediately sent across against the exhausted handful of soldiers, destitute of both

provisions and water. The engagement was kept up throughout the day, and resulted in the discomfiture and retreat of the Marāthās. The remarkable feature of this engagement was that the British troops were all natives, without any European support, excepting the 24 artillerymen, of whom 20 were killed and wounded. Of 7 officers engaged, 4 were killed and 1 wounded; total casualties, 276 killed, wounded, and missing. This gallant fight is now commemorated by a stone obelisk. Koregaon contains a small school with 32 boys.

Lohogarh.—Fort in the Māval *tāluka* of Poona District, Bombay, situated in 18° 42′ N. and 73° 29′ E., near the top of the Bor pass, about 4 miles west of Khandāla. Population (1901), 237. Lohogarh is a fort of some antiquity and importance, and was possibly the Olochoera of Ptolemy. In modern times it is mentioned as one of the Bahmani forts taken by Malik Ahmad, the founder of the Nizām Shāhi dynasty. In 1648 Sivajī surprised it, but eighteen years later had to surrender it to the Mughals. It was retaken in 1670, and was afterwards made a subdivisional headquarters and a treasury. Kānhojī Angria, the Marāthā pirate, seized it in 1713. Subsequently, during the British operations against the last Marāthā Peshwā Bājī Rao in 1818, Lohogarh was occupied by Lieutenant-Colonel Prother. Till as late as 1845 the fort was garrisoned by a British commandant and a few troops.

Lonauli (*Lonāvla*).—Town in the Māval *tāluka* of Poona District, Bombay, situated in 18° 45′ N. and 73° 24′ E., about 40 miles north-west of Poona city at the top of the Bor pass. Lonauli is an important station on the south-east line of the Great Indian Peninsula Railway. Population (1901), 6,686. A railway reservoir, about 2 miles to the south, affords a fair supply of drinking-water. Close to the town is an ancient wood of fine trees, covering an area of about 56 acres. The municipality, established in 1877, had an average income during the decade ending 1901 of Rs. 11,300. In 1903–4 the income was Rs. 17,400, including Rs. 5,800 derived from the sale of Government securities and withdrawals from the Savings Bank. Lonauli contains locomotive works, Protestant and Roman Catholic chapels, a dispensary, eight schools (including two supported by missions) with 246 boys and 72 girls, a Masonic lodge, and co-operative stores. Branches of the Methodist Episcopal Mission and the United Free Church of Scotland Mission are at work in Lonauli. There are three

hotels, and the place is much frequented by visitors from Bombay in the hot months owing to its temperate climate.

Manchar.—Village in the Khed *tāluka* of Poona District, Bombay, situated in 19° N. and 73° 57′ E., on the right bank of the Ghod, about 12 miles north of Khed town. Population (1901), 5,300. The place is surrounded by a wall and belonged to Holkar till 1868–9, when it became British by exchange. To the west, beyond a watercourse, is a fine Hemādpanti reservoir about 25 yards square, with two flights of steps leading to the water. Except the west wall, which has a small niche with carved sideposts and sculptured foliage, the walls of the reservoir are plain. Within the niche is a much-worn inscription. Manchar appears to have been a Musalmān town of some importance, and has a small mosque at its south-west entrance. The mosque is entered by a fine single arch, surmounted by a projecting and bracketed cornice with a small minaret at each of the four corners. The village contains a school with 176 boys and 10 girls.

Otūr.—Village in the Junnar *tāluka* of Poona District, Bombay, situated in 19° 16′ N. and 73° 59′ E., about 50 miles north-north-west of Poona city. Population (1901), 6,392. Towards the close of Marāthā rule the tract of country round Otūr was much desolated by inroads of Khāndesh Bhīls, for security against whom a high fort was built at Otūr. In the neighbourhood are two temples: one dedicated to Keshav Chaitanya, the *gurū* or spiritual preceptor of the celebrated Tukārām; and the other a shrine of the god Mahādeo, in whose honour an annual fair, attended by about 2,000 persons, is held in August or September. Otūr contains one boys' school with 287 pupils and one girls' school with 54.

Pandare.—Village in the Bhīmthadi *tāluka* of Poona District, Bombay, situated in 18° 18′ N. and 74° 31′ E. Population (1901), 5,254. The Nīra Canal runs through the village, which is noted both for its sugar-cane industry, employing 2,000 labourers and yielding annually about 5 lakhs, and also for its stone, which is especially adapted for engraving. It contains one school with 80 boys.

Poona City (*Puna*).—Head-quarters of Poona District, Bombay, situated in 18° 31′ N. and 73° 51′ E., on the Great Indian Peninsula Railway, 119 miles south-east of Bombay, and a terminus of the Southern Mahratta Railway; 1,850 feet above the level of the sea, and, in a straight line, about 63 miles from the coast. The name seems to be derived from the Sanskrit *punyapur*, or 'cleanser,' probably referring to the holy Situation, &c.

meeting of the Muthā and Mulā rivers. It is the military capital of the Deccan, and from June to October the seat of the Government of Bombay.

Population. During the last fifty years Poona has been steadily growing in size. In 1851 its population was returned at 73,209; by 1863 it was supposed to have risen to about 80,000. At the next three enumerations it was: (1872) 118,886, (1881) 129,751, and (1891) 161,390. In 1901 it was returned at 111,381, exclusive of 41,939 in the cantonment and suburbs; total, 153,320. Hindus numbered 122,393; Muhammadans, 18,165; Christians, 8,474; Pārsīs, 1,900; and Jains, 1,473.

Climate. With the heat of April and May tempered by a sea-breeze, a moderate rainfall, and strong cool winds, the climate is agreeable, but of late years it has not been reputed to be healthy. The annual rainfall for 1891–1901 averaged 28 inches. The mean temperature in 1901 was 70°; maximum 110° (in May), minimum 43° (in December). Poona has suffered severely from the plague, which first gained a foothold in the city in January, 1897. In 1899 the mortality rose to 125 per week, or an annual death-rate of 207 per 1,000. Several repressive measures in 1897 failed to eradicate the epidemic.

History. The first mention of Poona in history seems to be in 1604, when it was granted by the Sultan of Ahmadnagar to Mālojī, the grandfather of Sivajī. In 1637 the grant was confirmed in favour of Shāhjī, father of Sivajī. In 1663, during the operations conducted against Sivajī by order of Aurangzeb, the imperial viceroy Shaista Khān took possession of the open town, from which, when surprised a few days afterwards by Sivajī, he had great difficulty in making his escape. His son and most of his guard were cut to pieces, and he himself wounded. A powerful force, however, immediately reinstated the discomfited commander. In 1667 Aurangzeb restored Poona to Sivajī; but under the sway of his successor Sambhājī, it was occupied by Khān Jahān, an officer of the emperor. On the Peshwā obtaining supremacy in the Marāthā confederacy, the chief seat of government was removed from Sātāra to Poona. In 1763 Nizām Alī of Hyderābād sacked the city and burned such parts of it as were not ransomed. In the struggle between the successive Peshwās and their nominal subordinates Sindhia and Holkar, Poona suffered many vicissitudes, until in 1802, by the provisions of the Treaty of Bassein, the Peshwā allowed a British subsidiary force to be stationed here.

The final defeat of the Peshwā Bājī Rao, and the capture of Poona in 1818, were the results of three engagements. In the

battle of KIRKEE (November 5, 1817) the British forces, commanded by Colonel Burr, defeated a vastly superior army under Bāpu Gokhale. The battle of Yeraoda (November 16 and 17, 1817) occurred near where the present Fitzgerald Bridge now stands, the British guns on 'Picket Hill' commanding the position. The British troops were commanded by Brigadier-General Lionel Smith. The result was the flight of the Peshwā's army and the immediate occupation of the city by the British. The third battle, that of KOREGAON (January 1, 1818), was fought 2 miles distant from Loni, on the right bank of the Bhīma, and 16 miles from Poona. After the deposition of the Peshwā Bājī Rao II (1818), the city became the head-quarters of a British District as well as the principal cantonment in the Deccan.

Poona stands on the right bank of the Muthā river. Much of the country round is barren and rocky, and to the east stretches an open plain. Not much high ground is seen to the north and west, but to the south extends a line of hills ending in the bold square rock of Sinhgarh. Close at hand, on the north, is the confluence of the streams of the Muthā and Mulā; through the heart of the city the line of the Kharakvāsla canal, and on the south the lake and temple-crowned peak of Parvatī are objects of interest. The Kātraj aqueduct was built by an ancient Marāthā family. This duct, together with three other private aqueducts, supplies the city in ordinary years with about half the required supply of drinking-water. The other half is derived from the Muthā Right Bank Canal at three places. The main near the Parvatī bank supplements the supply from the Kātraj aqueduct. The municipality draws from the canal about 750,000 gallons a day, for which it pays Rs. 10,000 to Government. Any amount drawn in excess of this is paid for at the rate of 3 annas per 1,000 gallons. The old water-works owe their existence to the liberality of Sir Jamsetjī Jījībhoy of Bombay, who contributed Rs. 1,75,000 towards the entire cost of Rs. 2,00,000. The new water-works for the Poona cantonment and suburbs were constructed in 1873–4, and were furnished with new settling-tanks and filter-beds in 1894–5. The maximum daily consumption from these works is 1,700,000 gallons. The pumping station is situated to the east of St. Mary's Church, the power being passed from a Poncelet wheel to three centrifugal pumps on the right bank of the canal and to a Worthington water engine on the left bank. There are five settling-tanks, with a total capacity equivalent to three days' consumption, and four filter-beds with

General aspects.

an area of 45,000 square feet. Water is pumped from the canal into the settling-tanks and thence into the filter-beds by means of centrifugal pumps. Two reservoirs supply the cantonments and suburbs, the charge for water by meter varying from 6 to 8 annas per 1,000 gallons, according as the cost of pipes and connexions is borne by the householder or not. For three or four months in the hot season very little water is available, and pumping has to be performed almost entirely by steam-power. Gardens on every side and groves of acacia along the banks of the rivers give much of the neighbourhood a green, well-clothed appearance.

The city proper extends along the Muthā for about 1½ miles inland, varying in height from 30 to 70 feet above the river. Its length is about 2 miles from east to west, and its breadth about 1¾ miles, the total area being 2½ square miles. For police and other purposes the city is divided among eighteen wards or *peths*. Under the Peshwās it was divided into seven quarters, named after the days of the week. The ruined palace of the Peshwās stands in the Shanwār quarter, or Saturday ward. The palace was burned down in 1827, and all that now remains is the fortified wall. The chief streets run north and south. Though broad in parts they are all more or less crooked, none of them offering an easy carriage-way from one end to the other. From east to west the only thoroughfare is by lanes, narrow, short, and interrupted. One of these was set apart for the execution of criminals, who, in the time of the Peshwās, were here trampled to death by elephants. Most of the houses are of more than one storey, their walls built of a framework of wood filled in with brick or mud, and with roofs of tile.

Objects of interest.

East of the city is the military station, with an area of 4¼ square miles and a population of 32,777. Within cantonment limits, northwards to the Muthā-Mulā river and for 2 miles along the road leading west to the cantonment of Kirkee, are the houses of the greater part of the European population. The remaining European quarter or Civil Lines was made a suburban municipality in 1884. In area it covers 1¾ square miles, and had in 1903-4 an income and expenditure of Rs. 31,000 and Rs. 33,000 respectively, the former chiefly derived from a house tax and octroi. The first Residency was built where the present Judge's house now stands, at the Sangam or junction of the Mulā and Muthā rivers. The compound included the site of the present Science College and the English burial-ground close to the present Sangam Lodge. The Resident's quarters contained five houses, besides out-offices

for guard and escort parties. The entire block was destroyed on November 5, 1817, immediately upon the departure of Mr. Mountstuart Elphinstone to join the British forces drawn up for battle at Kirkee. There have been five European cemeteries open since the Marāthā possession of Poona—one near the old Residency, the second near the present church of St. Paul, the third in East Street, one near the rifle butts, and one on the left of the Sholāpur road. A new Residency was built near the present site of St. Paul's Church in 1819, and was accidentally burnt down in 1863. The Sangam Bridge was first built on piles in 1829, at a cost of Rs. 95,000. Sir John Malcolm opened it in 1830, under the name of the Wellesley Bridge, after the Duke of Wellington. It was rebuilt with stone in 1875, at a cost of Rs. 90,000. Holkar's Bridge was built by Mādhu Rao Peshwā, and so named because Holkar was accustomed to pitch his tents in its vicinity. Close by is 'Holkar's tomb' so called, being a Saiva temple erected in memory of Vithojī Holkar and his wife, who was a *satī*.

As a civil station, Poona is the residence of the usual District officers and the head-quarters of the Commissioner of the Central Division. It is also the monsoon head-quarters of the Bombay Government. The garrison generally consists of European and Native infantry, artillery, and cavalry. There is a branch of the Bank of Bombay.

In addition to the Peshwā's palace, already referred to, the city contains numerous palaces and temples from one to three hundred years old, of which the chief are: Belbāg, built by Nāna Farnavīs about a century ago; the Farāskhāna, the remains of the Budhwār palace which was burnt down in 1879; Ganpati's temple; the new market, built by the Poona city municipality; the temple of Omkāreshwar; the Vishrāmbāg palace, now used as a Government high school. Other chief objects of interest, outside the Poona city municipal limits, are: the arsenal, built in 1882; the Bund gardens on the right bank of the Mulā-Muthā river; the Saiva caves of Bhāmburda, the oldest remains in Poona; Chatarshingi hill with a temple of a *devī*, where a large fair is held annually in September–October; the Western India club; the council hall; Government House, Ganeshkhind; the Poona gymkhana; Yeraoḍa Central jail, intended for all classes of prisoners, as well as for relieving the overcrowding of the several District jails; the Sassoon Hospital; the Jewish synagogue; the office of the City Magistrate, formerly the jail; the Native General Library; the General Post and Telegraph office; the Record office or Poona Daftar; and the Empress Gardens

at Wanowri. The total number of in-patients treated at the Sassoon Hospital in 1903–4 was 2,585, in addition to 12,110 out-patients. Other medical institutions are the Roman Catholic school hospital, the St. Margaret Hospital, St. John's Hospital, and six dispensaries, treating annually about 40,000 patients.

Municipality and cantonment.

The city municipality, established in 1857, had an average income during the decade ending 1901 of $3\frac{1}{2}$ lakhs. In 1903–4 the income was also $3\frac{1}{2}$ lakhs. The chief items of income are octroi ($1\frac{1}{4}$ lakhs) and conservancy tax (Rs. 39,000), while the expenditure, which amounted to 3 lakhs in 1903–4, is chiefly devoted to conservancy (1 lakh) and establishment charges (Rs. 44,000). The income and the expenditure of the cantonment fund in 1903–4 were nearly 1·8 lakhs and 1·5 lakhs respectively.

Industries.

Though Poona is no longer so great a centre of trade and industry as under the Peshwās, there are still many hand-looms for the weaving of fabrics of silk and cotton; and articles of brass, copper, iron, and clay are made in the city. Throughout Western India Poona workers have earned a reputation for the manufacture of cloth, silver and gold jewellery, combs, dice, and other small articles of ivory, fans, baskets, and trays of *khas-khas* grass ornamented with peacocks' feathers and beetles' wings, and of small, carefully dressed clay figures representing the natives of India. There are now several important factories in the city and its immediate vicinity. Chief of these are the gun-carriage factory [1] and arsenal in cantonments, and the small arms and ammunition factories at Kirkee. At Dāpuri there is a large brewery. In addition there are two cotton-mills, some iron and brass foundries, and a paper-mill.

Education.

Besides a female normal school, an unaided normal class for mistresses, and a training college for preparing teachers for vernacular and Anglo-vernacular schools, and several Government and private vernacular, Anglo-vernacular, and English schools, Poona has twelve high schools and three colleges—the Deccan and Fergusson Colleges teaching up to the degrees of B.A. and first LL.B., and the College of Science with special training for civil engineers and agricultural specialists. There is a medical school attached to the Sassoon Hospital, a forest class at the College of Science, a municipal technical school, and a reformatory at Yeraoda. The total number of schools is 78 for boys with 7,205 pupils, and 4 for girls with 3,318 pupils. The city contains two Subordinate Judges' courts, in addition to the chief revenue, judicial, and other public offices. Besides the purely

[1] The gun-carriage factory was closed in 1907.

European clubs, Poona contains the Deccan club, to which both Europeans and natives can belong; two native clubs, the Sarvajanik Sabha and the Deccan Sabha; and a newly opened club for ladies. The most important library is the Native General Library in Budhwār Peth.

Purandhar Hill.—Once a fortress, and now a sanitarium for European troops in the Poona division of the Western Command, in the Purandhar *tāluka* of Poona District, Bombay. It really consists of two separate hill forts, Purandhar and Vazīrgarh, situated in 18° 17′ N. and 73° 59′ E., 20 miles south-east of Poona city. Population (1901), 944. The income and expenditure of the cantonment fund in 1903-4 were each Rs. 1,800. The highest point of the mountain of Purandhar is upwards of 1,700 feet above the plain, and 4,472 feet above sea-level. Purandhar is larger, higher, and more important than Vazīrgarh. The summit of both hills is crowned with masonry ruins studded here and there with bastions. Purandhar is varied by two elevations, on the higher of which, the loftiest point in the range, is a temple to Siva. The hill on which this temple stands is part of the upper fort of Purandhar. On the northern face of the hill, 300 feet below the temple and upwards of 1,000 feet above the plain, runs a level terrace on which stands the military cantonment, flanked on the east by the barracks and on the west by the hospital. The northern edge of the terrace is defended by a low wall with several semicircular bastions and a gate flanked by two towers. This is called the Māchi or 'terrace' fort. At the foot of the hill is a well-built resthouse, from which the ascent leads by a wide, easy road. From the middle of the cantonment a winding road, 830 yards long, runs towards the upper fort, ending in a flight of rude stone steps which wind between a loopholed wall of masonry and the basalt cliff on which the fort stands. A sharp turn leads suddenly to the Delhi Gate, flanked by solid bastion towers. The defences, like most of the hill forts in this part of the country, are of perpendicular rock, weakened rather than strengthened by curtains and bastions of masonry.

The earliest known mention of Purandhar is in the reign of the first Bahmani king, Alā-ud-dīn Hasan Gangū (1347-58), who obtained possession of almost the whole of Mahārāshtra, from the Purandhar range to the Cauvery, and fortified Purandhar in 1350. During the early rule of the Sultāns of Ahmadnagar Purandhar was among the forts which were reserved by the government and never entrusted to *jāgīrdārs*

or estate-holders. The fort of Purandhar passed to Mālojī, the grandfather of Sivajī, when Bahādur Nizām Shāh of Ahmadnagar (1596–1600) granted him Poona and Supa. In 1665 it was invested by the forces of Aurangzeb, under the command of Rājā Jai Singh, the famous Rājput general, assisted by the Afghān Dilāwar Khān. Though the defence by Bājī Prabhu, a Deshpānde of Mahād, who was the commandant of the fort, was obstinate, Sivajī appears to have been so intimidated at the prospect of the fall of Purandhar that he surrendered it, together with Sinhgarh, and entered the service of Aurangzeb. He revolted, however, and recaptured Purandhar in 1670. After the power of the Peshwās at Poona had superseded that of the descendants of Sivajī, Purandhar was the usual stronghold to which the Peshwās retreated when unable to remain in safety at their capital. Here, in 1776, was concluded a treaty between the British Government and the Marāthā States; but its conditions were never fulfilled, being overruled by the subsequent Treaty of Sālbai in 1782 between the British Government and Sindhia, at the close of the second Marāthā War. In 1818 Purandhar was invested by a British force under General Pritzler. On March 14 a mortar battery opened on it; and on the 15th Vazīrgarh admitted a British garrison. As Vazīrgarh commanded Purandhar, the commandant had to accept the terms given to that garrison, and the British colours were hoisted at Purandhar on March 16, 1818. The fort commands a passage through the hills, called the Purandhar *ghāt*.

Rājmāchi (or 'the royal terrace').—An isolated double-peaked fortified hill on the main line of the Western Ghāts, in the Māval *tāluka* of Poona District, Bombay, situated in 18° 50′ N. and 73° 24′ E., about 6 miles north of the Bor Pass. It can be visited from Khandāla or Lonauli. From the Konkan, thickly wooded at the base, its sides rise about 2,000 feet in steep rock slopes which, as they near the crest of the hill, grow gradually treeless and bare. Above the crest from the flat hill-top towers a rocky neck about 200 feet high with at either end a short fortified tower-like head, the inner, Srīvardhan ('luck's increase'), high and pointed, the outer, Manranjan ('heart gladdener'), lower and flat-topped. A tongue of land about 300 yards broad joins Rājmāchi to the rough plateau that runs along the crest of the Ghāts north from Khandāla. Across this tongue of land, half a mile from the foot of the central hill-top, is a strong stone wall 17 feet high and 8 thick, with a parapet loopholed for musketry, and

with bastions at intervals pierced for cannon. A wide stretch of tilled land within this line of wall ensured the garrison a full supply of grain, grass, and fuel. From this upland, at a safe distance from the neighbouring heights, the central hill-top rises 300 to 400 feet high, a sheer, black, overhanging cliff crowned by a battlemented peak, and towards the west strengthened by a double line of encircling walls. On the crest of the neck that joins the two peaks, fronting a small temple of Bhairav, stand three old stone lamp-pillars or *dipmāls*, and two small, quaintly carved stone chargers ready saddled and bridled for the god. The temple, which is little more than a hut, has three pairs of small, black stone images of Bhairav and his wife Jogeshvari, presented, according to tradition, by Sivajī, Sāhū, and Bājī Rao Peshwā. Srīvardhan, the eastern and higher fort, less sheer to the south than to the north, is in places strengthened by a triple line of wall. On the south side, through the ruined gateway, is reached a chamber cut in the rock, once used as a granary or storehouse, and close by is a large rock-cut reservoir. On the north, in a narrow ledge of the steep cliff, hollowed into the hill and always sheltered from the sun, is a cistern with an unfailing supply of pure water. The inner fortification, with a few ruined dwellings, encloses the central peak, the *gadhi* or 'stronghold.' Manranjan, the outer hill, less completely protected by nature, is very carefully fortified with two high strong lines of wall. The outer line, running along the crest of the cliff, encloses some cisterns and reservoirs of cut stone; the inner, encircling the flat hill-top, has within it the powder magazine, a long, low, tomb-like, roofless building of very closely fitting cut stone, and close to it the ruins of the commandant's house and a cistern. The western wall commands the delightful prospect that gives the fort its name. Below lies the royal terrace, wooded and stream-furrowed to the north, bare and well-tilled to the west, and to the south laid out in fields with a small lake and a shady hamlet of Kolī huts. North and south, beyond the plateau, stretches the main line of the Western Ghāts, their sides rising from deep evergreen forests in bare black cliffs, to the rough, thinly wooded, part-tilled terrace that extends eastwards into the Deccan plain and along the crest, broken by wild, rocky peaks and headlands, from Harischandragarh 50 miles to the north to Bhojya 18 miles to the south. Westwards stretch outlying spurs and ranges with deep, water-worn valleys and steep, well-wooded sides. Far off to the right rise Māhuli,

Gotaura, Tungār, and the Salsette hills; in front, beyond the long flat backs of Mātherān and Prabal, lie the harbour, island, and city of Bombay; and to the left sweeps the long range of hills that passes by Nāgothna and Sāgargarh from the Western Ghāts to the extreme west of Alībāg.

The first notice of Rājmāchi is in 1648, when it was taken by Sivajī. In 1713 the fort surrendered to Angria, and was ceded by him in 1730 to the second Peshwā Bājī Rao (1721–40). In 1776 the impostor Sadoba, a Kanaujia Brāhman who called himself Sadāshiv Rao Bhau, took the greater part of the Konkan and came to the Bor Pass. Here he was opposed for a time, but eventually carried the Pass, and received offers of submission from Rājmāchi. The Poona ministers then occupied his attention with pretended overtures of submission, until two of the Peshwā's officers suddenly fell on him in the neighbourhood of Rājmāchi, and drove him and his force to the Konkan. In the last Marāthā War of 1818 the fort surrendered without resistance.

Sāsvad.—Head-quarters of the Purandhar *tāluka* of Poona District, Bombay, situated in 18° 21′ N. and 74° 2′ E., on the left bank of the Karha river, 16 miles south-east of Poona city. Population (1901), 6,294. Sāsvad was the original Deccan home of the Peshwā's family. Beyond the town, across the Karha river, stands the old palace of the Peshwā, now used as the Collector's office. Near the junction of the Karha and one of its minor tributaries is a walled building, the palace of the great Brāhman family Purandhare of Purandhar, whose fortunes for upwards of a century were closely connected with those of the Peshwās. This latter palace was formerly strongly fortified, and in 1818 was garrisoned and held out for ten days against a detachment of British troops. About 1840 the Mīrs of Sind were confined in Sāsvad. There is a mosque built entirely of Hemādpanti pillars and remains. The municipality, which was established in 1869, had during the decade ending 1901 an average income of Rs. 5,900. In 1903–4 the income was Rs. 6,700. The town contains a Sub-Judge's court, a dispensary, and four schools with 440 pupils, one of which is for girls with an attendance of 60. Sāsvad is a station of the United Free Church of Scotland Mission, which works in the surrounding villages and supports one school.

Shivner.—Hill fort of the town of Junnar, in the Junnar *tāluka* of Poona District, Bombay, situated in 19° 12′ N. and 73° 52′ E., not far from Harischandragarh, and about 56 miles

north of Poona city. The hill of Shivner rises over 1,000 feet, and stretches about a mile across the plain. It is triangular in shape, narrowing from a southern base of about 800 yards to a point of rock in the north. Near the south, the lower slopes of its eastern face are crossed by a belt of rock 40 or 50 feet high. The south-west of the hill is broken, and about half-way up is strengthened by outworks and bastioned walls. During the first and second and probably the third centuries after Christ, the hill seems to have been a great Buddhist centre. About 50 cells and chapels remain. They are found on three sides of the hill, but most of them are cut in its eastern face. Shivner was granted in 1599 to Sivajī's grandfather, Mālojī Bhonsla; and here in 1627 Sivajī was born. It was often taken and retaken; and once, in 1670, the forces of Sivajī himself were beaten back by its Mughal garrison. Besides its five gates and solid fortifications, it is celebrated for its deep springs. They rise in pillared tanks of great depth, supposed to be coeval with the series of Buddhist caves which pierce the lower portion of the scarp. The fort commands the road leading to the Nānaghāt and Mālsejghāt, formerly the chief line of communication between this part of the Deccan and the coast.

[For further information respecting Shivner fort and caves, see the *Gazetteer of the Bombay Presidency*, vol. xviii, part iii, pp. 153–63, 184–201 (Bombay, 1885).]

Sinhgarh ('lion's fort').—Hill fort in the Haveli *tāluka* of Poona District, Bombay, situated in 18° 22′ N. and 73° 45′ E., about 12 miles south-west of Poona city, on one of the highest points of the Sinhgarh-Bhuleshwar range, 4,322 feet above sea-level, and about 2,300 feet above the plain. Population (1901), 1,142. On the north and south Sinhgarh is a huge rugged mountain with a very steep ascent of nearly half a mile. From the slope rises a great wall of black rock more than 40 feet high, crowned by nearly ruined fortifications. The fort is approached by pathways and by two gates. The north-east or Poona gate is at the end of a winding ascent up a steep rocky spur; the Kalyān or Konkan gate to the south-west stands at the end of a less difficult ascent, guarded by three gateways, all strongly fortified and each commanding the other. The outer fortifications, which consist of a strong stone wall flanked with towers, enclose a nearly triangular space about 2 miles round. The north face of the fort is naturally strong; the south face, which was stormed by the British in 1818, is the weakest. The triangular plateau within the walls is resorted

to as a health resort by the European residents of Poona in the hot months of April and May, and has several bungalows. The fort was originally known as Kondhāna. In 1340 Muhammad bin Tughlak is recorded to have blockaded it. In 1486 it fell to the founder of the Ahmadnagar dynasty on his capture of Shivner. In 1637 Kondhāna was given up to Bijāpur. In 1647 Sivajī acquired the fort by means of a large bribe to its Muhammadan commandant, and changed its name to Sinhgarh. In 1662, on the approach of a Mughal army under Shaista Khān, Sivajī fled from Supa to Sinhgarh; and from Sinhgarh he made his celebrated surprise on Shaista Khān's residence in Poona. In 1665 a Mughal force blockaded Sinhgarh, and Sivajī submitted. In 1670 it was retaken by Tānājī Mālusre, this capture forming one of the most daring exploits in Marāthā history. Between 1701 and 1703 Aurangzeb besieged Sinhgarh. After three and a half months' siege the fort was bought from the commandant, and its name changed to Bakhshindabaksh, or 'God's gift.' In 1706, as soon as the Mughal troops marched from Poona to Bijāpur, Shankrajī Nārāyan Sachiv, chief manager of the country round, retook Sinhgarh and other forts. Sinhgarh remained with the Marāthās till the war of 1818, when it was carried by storm by General Pritzler.

Sirūr Town (or Godnadi).—Head-quarters of the *tāluka* of the same name in Poona District, Bombay, situated in 18° 50′ N. and 74° 20′ E., on the Ghod river, 36 miles north-east of Poona city and 34 miles south-west of Ahmadnagar. Elevation, about 1,750 feet above sea-level. Population (1901), 7,212. The country around is hilly and uncultivated. Sirūr has been a municipality since 1868, with an average income during the decade ending 1901 of Rs. 12,000. In 1903–4 the income was Rs. 13,000. It contains many money-lenders, traders, and shopkeepers, who trade in cloth and grain. At the weekly market on Saturdays large numbers of cattle and horses are sold. The garrison of Sirūr consists of a regiment of native cavalry. The most notable monument in the cemetery is the tomb of Colonel W. Wallace (1809), who is still remembered at Sirūr as *Sat Purush*, 'the holy man.' Except Brāhmans and Mārwāris, all the Hindus of Sirūr and neighbouring villages worship at Colonel Wallace's tomb. At harvest-time the villagers bring firstfruits of grain as *naivedya*, or 'food for the saintly spirit.' At a hamlet about 2 miles south of the town a Hindu fair, attended by about 3,000 persons is held yearly in March or April. The town contains five

boys' schools with 385 pupils, and two girls' schools with 177. A branch of the American Marāthī Mission maintains two orphanages and four schools, including an industrial school. One of the late members of the mission planted an extensive agave plantation here, the plants having been specially procured from Mexico. A branch of the Salvation Army was founded in 1893.

Talegaon-Dābhāde.—Town in the Māval *tāluka* of Poona District, Bombay, situated in 18° 43′ N. and 73° 41′ E., 20 miles north-west of Poona city, on the south-east branch of the Great Indian Peninsula Railway. Population (1901), 5,238. Talegaon takes its second name from the family of Dābhāde, its hereditary *pātels*, who played a foremost part in the Marāthā conquest of Gujarāt during the first part of the eighteenth century. The most distinguished member, Khande Rao Dābhāde, was appointed Senāpati, or commander-in-chief, in 1716. The present representative ranks as a first-class Sardār in the Deccan. Talegaon was the farthest point reached by the British force sent from Bombay in 1779 to restore Raghunāth Rao to Poona as Peshwā. Finding the town burnt before them and being surrounded by a Marāthā army, they threw their guns into the large tank, retreated by night to WADGAON, three miles farther west, and there agreed to a humiliating capitulation. In 1817, five days after the battle of Kirkee, two British officers, brothers of the name of Vaughan, while on their way from Bombay to Poona, were seized and hanged here by the roadside. Their graves are 20 yards off the road. The municipality was established in 1866, and had an average income during the decade ending 1901 of Rs. 7,100. In 1903-4 the income was Rs. 6,800. The large tank to the west of the town provides an ample supply of drinking-water. The town contains a dispensary, three boys' schools with 190 pupils, and one girls' school with 132. Two schools are maintained by the local branch of the Methodist Episcopal Mission.

['The Bakhar of the Dābhādes,' *Times of India*, February 2, 1907.]

Talegaon-Dhamdhere.—Village in the Sirūr *tāluka* of Poona District, Bombay, situated in 18° 40′ N. and 74° 9′ E., 20 miles north-east of Poona city. Population (1901), 6,468. The Marāthā family of Dhamdhere has long held the foremost place in Talegaon, and its name is given to the town to distinguish it from TALEGAON-DĀBHĀDE in the Māval *tāluka* of Poona District. A weekly market is held on Mondays. The annual fair in February-March is attended by about 3,000

people, to visit the shrine of Nāthā, a saint who lived in Sivajī's time. The village possesses many temples, a dispensary, and four schools with 162 boys and 9 girls. A branch of the Salvation Army is stationed here.

Vālha.—Village in the Purandhar *tāluka* of Poona District, Bombay, situated in 18° 11′ N. and 74° 9′ E., about 15 miles south-east of Sāsvad. Population (1901), 4,929. Vālha has a weekly market held on Tuesday. According to a Marāthā legend Vālha was the residence of Vālmīki, the author of the Rāmāyana. Vālmīki is said to have been a Kolī, and his popular designation in song and folklore is Vālhya Kolī. The town contains one school with 166 pupils.

Wadgaon Town. — Head-quarters of the Māval *tāluka* of Poona District, Bombay, situated in 18° 44′ N. and 73° 28′ E., on the south-east branch of the Great Indian Peninsula Railway, 23 miles north-west of Poona city. Population (1901), 1,248. It was the scene of the disgraceful convention of Wadgaon, by which in 1778-9 the commanders of the Bombay army, which had been sent to restore Raghunāth Rao to Poona, agreed to give up to the Marāthās all the British conquests since 1773 as the price of being allowed to retreat. The town contains a Sub-Judge's court and the revenue offices of the *tāluka*, and one school with 52 pupils.

Boundaries, configuration, and hill and river systems.

Sātāra District.—District in the Central Division of the Bombay Presidency, lying between 16° 48′ and 18° 11′ N. and 73° 36′ and 74° 58′ E., with an area of 4,825 square miles. It is bounded on the north by the States of Bhor and Phaltan and the Nīra river, separating it from Poona; on the east by Sholāpur District and the States of Aundh and Jath; on the south by the river Vārna, separating it from the States of Kolhāpur and Sāngli, and by a few villages of Belgaum District; and on the west, along the Western Ghāts, by the Districts of Kolāba and Ratnāgiri.

From Mahābaleshwar in the north-west corner of the District, 4,717 feet above the sea, start two hill ranges of equal height and nearly at right angles to each other—one the main range of the Western Ghāts running towards the south for sixty miles, and the other the Mahādeo range of hills, which, going first in an easterly and then in a south-easterly direction, extends towards the eastern boundary, where it sinks gradually into the plain. These hills throw out numerous spurs over the District, forming the valleys of the several streams which make up the head-waters of the Kistna, one of the largest rivers in Southern India. Except near Mahābaleshwar, and in the valley of

the Koyna, the hills of the District are very low and have a strikingly bare and rugged aspect. The Mahādeo range, even in the rainy season, is but scantily covered with verdure. The hills are bold and abrupt, presenting in many cases bare scarps of black rock and looking at a distance like so many fortresses. The highest point of the Western Ghāts in the District is MAHĀBALESHWAR. The crest of the range is guarded by five forts: PRATĀPGARH the northernmost, Makarandgarh 7 miles south, Jangli-Jaigarh 30 miles south of Makarandgarh, Bhairavgarh 10 miles south of Jangli-Jaigarh, and Prachitgarh about 7 miles south of Bhairavgarh.

Within Sātāra limits are two river systems: the Bhīma system in a small part of the north-east, and the Kistna system throughout the rest of the District. A narrow belt beyond the Mahādeo hills drains north into the Nīra, and the north-east corner of the District drains south-east along the Mān. The total area of the Bhīma system, including part of the Wai *tāluka*, the whole of Phaltan, and the *tāluka* of Mān, is probably about 1,100 miles, while the area of the Kistna system is 4,000. Of the Kistna's total length of 800 miles, 150 are within this District. It rises on the eastern brow of the Mahābaleshwar plateau. The six feeders on the right bank of the Kistna are the Kudāli, Vena, Urmodi, Tārli, Koyna, and Vārna; the two on the left are the Vāsna and Yerla. Of the Bhīma river system, the chief Sātāra representatives are the Nīra in the north and the Mān in the north-east. The Nīra rises within the limits of the State of Bhor, and running through Wai, Phaltan, and Mālsiras in Sholāpur, after a total length of 130 miles, falls into the Bhīma. The Mān river rises in the hills in the north-west of the Mān *tāluka*, and, after a course of 100 miles through that *tāluka* and the Atpādi *mahāl* of Aundh State and through Sāngola and Pandharpur in Sholāpur, joins the Bhīma at Sarkoli, 10 miles south-east of Pandharpur.

Geology. The whole of Sātāra lies within the Deccan trap area. As in other parts of the Western Deccan, the hills are layers of soft or amygdaloid trap, separated by flows of hard basalt and capped by laterite or iron-clay.

Botany. The botanical features of Sātāra are similar to those of adjacent Deccan Districts. The spurs and slopes that branch east from the Western Ghāts are covered by teak mixed with brush-wood. As is usual in the Deccan, the cultivated parts have but few trees, though mango groves are common near towns and villages. Most of the roadsides are well shaded with avenues of banyan and mango. Several types of flowering

plants are found on the hills, notably the *Capparis*, *Hibiscus*, *Impatiens*, *Crotalaria*, *Indigofera*, *Smithia*, *Kalanchoe*, *Ammania*, *Senecio*, *Lobelia*, *Jasminum*, as well as fine examples of the orchid family. Oranges, limes, figs, and pomegranates are widely grown; but an attempt to introduce European fruit trees at Pānchgani has met with indifferent success. Mahābaleshwar strawberries have gained a well-deserved reputation.

Fauna.

In the west near the Ghāts, chiefly in the Koyna valley and the Mala pass hills, are found the tiger, leopard, bear, and a few *sāmbar* and small deer. In the east antelope or black buck, and the *chinkāra* or Indian gazelle, are met with in certain sparsely populated tracts. Common to both east and west are the hare, monkey, and hog. The Vena, Kistna, Koyna, and Vārna rivers are fairly stocked with fish. Game-birds are not numerous, the chief being the common sand-grouse, the painted partridge, common grey partridge, quail, and snipe. From December to March the demoiselle crane is to be found in flocks on some of the rivers and reservoirs. Herons and egrets are common. Of the ibis four species, and of duck seven species, are to be seen on the larger rivers.

Climate, temperature, and rainfall.

According to the height above, and distance from, the sea, the climate varies in different parts of the District. In the east, especially in the months of April and May, the heat is considerable. But near the Ghāts it is much more moderate, being tempered by the sea-breeze. The temperature falls as low as 58° in January and reaches 100° and over in May. During the south-west monsoon the fresh westerly breeze makes the climate agreeable. Again, while few parts of India have a heavier and more continuous rainfall than the western slope of the Western Ghāts, in some of the eastern *tālukas* the supply is very scanty. The average annual rainfall at Mahābaleshwar is nearly 300 inches, while in Sātāra town it is only 41 inches, and in some places farther east it is as little as 20 inches. The west of the District draws almost its whole rain-supply from the south-west monsoon between June and October. Some of the eastern *tālukas*, however, have a share in the north-east monsoon, and rain falls there in November and December. The May or 'mango' showers, as they are called, also influence the cultivator's prospects.

History.

It seems probable that, as in the rest of the Bombay Deccan and Konkan, the Andhra or Sātavāhana kings (200 B.C.–A.D. 218), and probably their Kolhāpur branch, held Sātāra till the third or fourth century after Christ. For the nine hundred years ending early in the fourteenth century with the Muham-

madan overthrow of the Deogiri Yādavas, no historical information regarding Sātāra is available; and most of the Devanāgari and Kanarese inscriptions which commonly exist on old temples have not yet been translated. Still, as inscribed stones and copperplates have been found in the neighbouring Districts of Ratnāgiri and Belgaum and the State of Kolhāpur, it is probable that the early and Western Chālukyas held Sātāra District from about 550 to 750; the Rāshtrakūtas to 973; the Western Chālukyas, and under them the Kolhāpur Silāhāras, to about 1190; and the Deogiri Yādavas till the Muhammadan conquest of the Deccan about 1300.

The first Muhammadan invasion took place in 1294, and the Yādava dynasty was overthrown in 1318. The Muhammadan power was then fairly established, and in 1347 the Bahmani dynasty rose to power. On the fall of the Bahmanis towards the end of the fifteenth century, each chief set up for himself; the Bijāpur Sultāns finally asserted themselves, and under them the Marāthās arose. Sātāra, with the adjacent Districts of Poona and Sholāpur, formed the centre of the Marāthā power. It was in this District and in the adjacent tracts of the Konkan that many of the most famous acts in Marāthā history occurred. Sivajī first became prominent by the murder of the Rājā of Jāvli close to Mahābaleshwar, and by the capture of the strong fort of Vāsota and the conquest of Jāvli. He then built the stronghold of Pratāpgarh (1656), against which the Bijāpur Sultān directed a large force under Afzal Khān with the object of subduing his rebellious vassal. Sivajī met Afzal Khān in a conference underneath the walls of Pratāpgarh, slew him with the famous *vāgh-nak* (steel tiger's claw), and routed his army in the confusion that ensued. Numerous acquisitions of territory followed, including the capture of Sātāra in 1673; and Sivajī shortly found himself in a position to organize an independent government, placing his capital at Raigarh, where he was crowned in 1674. On the death of Sivajī in 1680 the fortune of the Marāthās was temporarily overshadowed. Dissensions occurred between his sons Rājārām and Sambhājī; and though the latter, as the elder, established his claim to succeed, he was surprised and captured by the Mughals under Aurangzeb in 1689, and put to death. Rājārām was equally unable to stay the advance of the emperor, and in 1700 the capture of Sātāra crowned the efforts of Aurangzeb to reassert his power in the Marāthā territory. In 1707 Aurangzeb died, and Sambhājī's son Sāhu was released. Aided by his minister Bālājī Viswanāth, the

first of the Peshwās, he secured Sivajī's possessions in the face of the opposition of Tāra Bai, Rājārām's widow. The remainder of Sāhu's reign was devoted to freeing himself from the power of Delhi, and asserting his right to levy *chauth* and *sardeshmukhi* in outlying portions of the Deccan. He was gradually superseded in authority by his able minister the Peshwā, who, on his death in 1749, removed the Marāthā capital to Poona. Titular kings continued to reside at Sātāra until the power of the Peshwā was broken in 1818.

The territory was thereupon annexed; but the British, with a politic generosity, freed the titular Marāthā Rājā (the descendant of Sivajī) from the Peshwā's control, and assigned to him the principality of Sātāra. Captain Grant Duff was appointed his tutor until he should gain some experience in rule. In April, 1822, the Sātāra territory was formally handed over to the Rājā, and thenceforward was managed by him entirely. After a time he became impatient of the control exercised by the British Government; and as he persisted in intriguing and holding communications with other princes, in contravention of his engagements, he was deposed in 1839, and sent as a state prisoner to Benares, and his brother Shāhjī was placed on the throne. This prince, who did much for the improvement of his people, died in 1848 without male heirs; and after long deliberation it was decided that the State should be resumed by the British Government. Liberal pensions were granted to the Rājā's three widows, and they were allowed to live in the palace at Sātāra. The survivor of these ladies died in 1874. During the Mutiny a widespread conspiracy was discovered at Sātāra to restore the Marāthā power with assistance from the North; but the movement was suppressed with only trifling disturbances.

Archaeology.

Besides the Buddhist caves near KARĀD and WAI, there are groups of caves and cells, both Buddhist and Brāhmanical, at Bhosa in Tāsgaon, Mālāvdi in the Mān *tāluka*, Kundal in the State of Aundh, Pātan in Pātan, and Pāteshwar in Sātāra. Wai is locally believed to be Vairātnagari, the scene of the thirteenth year of exile of the Pāndavas. Sātāra, Chandan, and Vandan forts, situated 10 miles north-east of Sātāra, were built by the Panhāla kings about 1190.

Except the Jāma Masjid at Karād and a mosque in Rahīmatpur the District has no Musalmān remains. Sivajī built a few forts in Sātāra to guard the frontiers. The best known of these are the Mahimangarh fort in Mān to guard the eastern frontier, Pratāpgarh in Jāvli to secure access to his possessions

on the banks of the Nīra and the Koyna and to strengthen the defences of the Pār pass, and Vardhangarh. The District has a number of Hindu temples recently built at places of great sanctity, e.g. Māhuli, Wai, and Mahābaleshwar.

The number of towns and villages in Sātāra is 1,343. The population at each of the last four enumerations has fluctuated as follows: (1872) 1,062,121, (1881) 1,062,350, (1891) 1,225,989, and (1901) 1,146,559. The decrease during the last decade was due to famine, and also to plague. The distribution of the population by *tālukas* in 1901 is shown below:— The people.

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Wai	391	1	92	71,645	241	+ 5	4,317
" Khandāla *petha*		...	33	22,732		− 13	794
Mān	629	1	76	64,889	103	+ 3	2,080
Jāvli	423	...	195	52,852	155	− 11	983
" Malcolmpeth *petha*		1	54	12,735		+ 12	846
Sātāra	339	1	152	128,391	379	− 9	6,563
Koregaon	346	...	74	83,375	241	− 9	4,063
Khānāpur	510	...	91	86,049	169	− 13	3,037
Pātan	438	...	203	104,167	238	− 23	2,168
Karād	378	1	98	134,947	357	− 13	5,091
Khatao	501	...	85	96,416	192	+ 1	3,570
Vālva	545	2	53	143,030	359	+ 6	7,001
" Shirāla *petha*		...	81	52,919		− 7	1,483
Tāsgaon	325	1	48	92,412	284	− 1	4,799
District total	4,825	8	1,335*	1,146,559	238	− 6	46,795

* The Agricultural department's returns give the total number of villages as 1,358.

The towns are SĀTĀRA, the head-quarters, WAI, ASHTA, ISLĀMPUR, KARĀD, TĀSGAON, MHASVĀD, and MAHĀBALESHWAR. The average density of population is 238 persons per square mile; but the Mān *tāluka*, which is the most precarious, has only 103 persons per square mile. Marāthī is the prevailing vernacular, being spoken by 95 per cent. of the people. Hindus include 95 per cent. of the total and Musalmāns 3 per cent., the proportion of the latter being lower than in any other District in the Presidency. The Jains, who number 18,483, are met with chiefly in the villages in the south of the Vālva and Tāsgaon *tālukas*. They bear the reputation of being laborious agriculturists, and contrast favourably with their neighbours the Marāthās and Marāthā Kunbīs. They represent a survival of the early Jainism, which was once the religion of the rulers of the kingdoms of the Carnatic.

Castes and occupations.

Of the Hindu population, 584,000, or 54 per cent., are Marāthās or Marāthā Kunbīs; 92,000, or 8 per cent., are Mahārs; 46,000, or 4 per cent., Brāhmans; and 45,000, or 4 per cent., Dhangars, or shepherds, who are mostly to be found in the hilly tract. Of the remainder, the following castes are of importance: Chamārs or leather-workers (17,000), Kumhārs or potters (12,000), Lingāyats (29,000), Mālīs or gardeners (28,000), Māngs (26,000), Nhāvis or barbers (15,000), Rāmoshis (21,000), and Sutārs or carpenters (11,000). The Marāthās or Marāthā Kunbīs, during the period of the Marāthā ascendancy (1674–1817), furnished the majority of the fighting men. The Māvlās, Sivajī's best soldiers, were drawn from the *ghātmātha* ('hill-top') portion of the District. During the last half-century they have become quiet and orderly, living almost entirely by agriculture. Dark-skinned, and as a rule small, they are active and capable of enduring much fatigue. Brāhmans, largely employed as priests or government servants, are found in large numbers in the towns of Sātāra and Wai. Agriculture is the main occupation of the people, supporting 73 per cent. of the total; 12 per cent. are supported by industry, and 1 per cent. by commerce.

Christian missions.

In 1901, 957 native Christians were enumerated, chiefly in Jāvli, Koregaon, Sātāra, and Wai. The American Mission began work in the District in 1834, when a girls' school was opened at Mahābaleshwar. Till 1849 the school was removed to Sātāra every year during the rainy season. Since 1849 Sātāra has had resident missionaries.

General agricultural conditions.

The soils belong to three main classes: red in the hills and black and light in the plains. The black soil, which is generally found near the river banks, is most widely distributed in the Kistna valley, making it the richest garden and 'dry-crop' land in the District. Near the heads of the streams which issue from the Western Ghāts, the red soil of the valleys yields most of the rice grown.

Chief agricultural statistics and principal crops.

Sātāra is mostly *ryotwāri*, about one-fifth of the total area being *inām* or *jāgīr* land. The chief statistics of cultivation in 1903–4 are shown in the table on the next page, in square miles.

Jowār and *bājra*, the staple food of the people, occupy 1,479 square miles in almost equal proportions. Rice-fields (69) are found in the valleys of the Ghāts, especially along the Koyna river. Wheat occupies 77 square miles. In the west, *nāchni* (69) and *vari* (69) are the principal crops. Pulses occupy 478 square miles, chiefly gram, *tur*, *kulith*, *udid*, *mūg*, and *math*. In the Kistna valley sugar-cane and ground-nuts are exten-

sively cultivated. Chillies occupy 14 square miles, and cotton covers 28 square miles in the east of the District. At Mahābaleshwar and Pānchgani potatoes and strawberries are grown for the Poona and Bombay markets. Tobacco is an important crop in Sātāra, occupying 8,000 acres.

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Wai . . .	392	242	16	1	71
Mān . . .	629	440	14	3	70
Jāvli . . .	423	240	9	2	145
Sātāra . .	339	228	18	2	33
Koregaon . .	346	254	11	2	42
Khānāpur . .	511	401	16	3	55
Pātan . . .	438	242	9	10	111
Karād . .	378	258	19	3	51
Khatao . .	501	362	18	3	32
Vālva . . .	545	400	19	7	63
Tāsgaon . .	325	259	6	2	29
Total	4,827*	3,326	155	38	702

* This figure is based on the most recent information. Statistics are not available for 335 square miles of this area.

In 1860 an experiment was made in the cultivation of *imphi* (*Holcus saccharatus*) or Chinese sugar-cane. The crop reached a height of 8 feet and was much appreciated. During the ten years ending 1904, more than 16 lakhs was advanced to the cultivators under the Land Improvement and Agriculturists' Loans Acts. Of this sum, 9 lakhs was advanced in the three years ending 1901–2. Improvements in agricultural practice.

Sātāra has two breeds of cattle, the local and the *khilāri*, which is said to come from the east. Though larger and more muscular, the *khilāri* is somewhat more delicate and short-lived than the local cattle. The valley of the Mān used to be famous for its horses. All interest in horse-breeding has now died out, and, except in the case of the chiefs and wealthy landowners, the animals ridden are seldom more than ponies. Sheep and goats are bred locally, few of them either coming into the District or leaving it. Goats are valued chiefly for their milk. One breed of goats whose long hair is twisted into ropes is kept by Dhangars. Surat goats are occasionally imported. Pigs are reared by Vadārs and Kaikādis, and donkeys as pack-animals by Lamānis, Kumbārs, and Vadārs. Mules are used as pack-animals sparingly, and camels are rarely seen. Cattle, ponies, &c.

A total area of $154\frac{1}{2}$ square miles, or 6 per cent., was irrigated in 1903–4, the principal sources of supply being Government Irrigation.

canals and channels (11 square miles), tanks and wells (88), other sources ($55\frac{1}{2}$). The chief irrigation works are: the Kistna, Chikhli, and Rewāri canals, the Yerla and Mān river works, and the lakes at Mhasvād and Māyni. The Kistna canal, which has its head-works 2 miles above Karād, has an unfailing supply of water, and irrigates 6 square miles in the *tālukas* of Karād, Vālva, and Tāsgaon. The works, which cost 8 lakhs, were opened in 1868, and can supply 12,000 acres. The Chikhli, Rewāri, and Gondoli canals cost respectively Rs. 57,000, Rs. 59,000, and 4 lakhs, and can supply 1,500, 1,900, and 2,000 acres. The Yerla river works, begun in 1867 and finished in 1868, the right-bank canal being 9 and the left $8\frac{1}{2}$ miles long, are supplemented by the Nehra lake, finished in 1880–1, with a capacity of 523,000,000 cubic feet. The whole scheme involved a cost of nearly 8 lakhs up to 1903–4, and commands an irrigable area of 5,000 acres. The Mhasvād lake, having a catchment area of 480 square miles and a full supply depth of 67 feet, completed at a cost of nearly 21 lakhs, covers an area of 6 square miles and can hold 2,633,000,000 cubic feet of water. It includes a large lake on the Mān river in the Mān *tāluka*, and also a high-level canal (13 miles long) commanding the area between the Mān and the Bhīma. The Māyni lake, on a tributary of the Yerla, cost about $4\frac{1}{2}$ lakhs, and commands 4,800 acres.

The water-supply in the west is plentiful, but there is much scarcity in the east during the hot season. The supply comes partly from rivers and partly from numerous ponds and wells. It is estimated that there are 32,600 wells in the District, of which 27,000 are used for irrigation. The cost of building wells varies greatly. They are of every description, from holes sunk in the rock or soil to carefully built wells faced with stone.

Forests. Forests cover an area of 702 square miles (including one square mile of protected forest), of which 616 square miles in charge of the Forest department are administered by a divisional and a subdivisional officer. The forests are scattered over the District, and are much broken by private and cultivated land. In the west, the belt of evergreen forest along the line of the Western Ghāts is divided into six fairly compact ranges with little cultivated land between. The seven eastern ranges are bare hills, with here and there a little scrub and teak. The forests of the western *tālukas* have a large store of timber and firewood. *Jāmbul*, *gela* (*Vangueria spinosa*), and *pesha* (*Cylicodaphne Wightiana*), grow on the main ridge of the Western Ghāts, and small teak on the eastern slopes. Sandal-

wood is occasionally found, and the mango, jack, and guava are often grown for their fruit. Patches of bamboo sometimes occur. A cinchona plantation, established in Lingmala near Mahābaleshwar, has proved a failure. In 1903-4 the forest revenue amounted to Rs. 46,000.

Minerals. Iron is found in abundance on the Mahābaleshwar and Mahādeo hills, and was formerly worked by the Musalmān tribe of Dhavads. Owing, however, to the fall in the value of iron and the rise in the price of fuel, smelting is now no longer carried on. Manganese occurs embedded in laterite in the neighbourhood of Mahābaleshwar. The other mineral products are building stone (trap in the plains and laterite on the hills), road-metal, and limestone.

Arts and manufactures. Cotton is spun by women of the Kunbī, Mahār, and Māng castes. The yarn thus prepared is made up by Hindu weavers of the Sāli or Koshti caste, and by Muhammadans, into cloth, tape, and ropes. Blankets (*kamblis*), which command a large sale, are woven by men of the Dhangar caste. Sātāra brass dishes and Shirāla lamps are well-known throughout the Deccan. Notwithstanding the great number of carpenters, wheels and axles for cart-making have to be brought from Chiplūn in Ratnāgiri. Paper is manufactured to some extent.

Commerce. The District exports grain and oilseeds, a certain number of blankets, a small quantity of coarse cotton cloth, chillies, *gur* (unrefined sugar), and a little raw cotton. The chief imports are cotton piece-goods, hardware, and salt. The Southern Mahratta Railway has largely increased the trade with Poona and Belgaum, and at the same time has diminished the road traffic between those places. The road-borne traffic with Chiplūn in Ratnāgiri District is, however, still considerable, the exports being unrefined sugar, blankets, and cloth, and the imports spices, salt, coco-nuts, and sheets of corrugated iron. Weekly or bi-weekly markets are held in large villages and towns, such as Mhasvād, which is famous for its blankets, and Belavdi, for its cattle. The trade-centres are Wai, Sātāra, Karād, Tāsgaon, and Islāmpur.

Communications. Railways and roads. The Southern Mahratta Railway traverses the centre of the District for 115 miles from north to south. The total length of roads is 433 miles metalled, and 284 unmetalled. Of these, 159 miles of metalled and 264 of unmetalled road are maintained by the local authorities, the remainder being in charge of the Public Works department. There are avenues of trees on about 400 miles. The Poona and Bangalore road, crossing the District from north to south near the railway, and bridged

and metalled throughout, is the most important. A first-class road is maintained from Wathar station via Wai to Pānchgani and Mahābaleshwar, whence it passes by the Fitzgerald *ghāt* to Mahād in Kolāba, and another runs from Karād westwards to Chiplūn in Ratnāgiri and eastwards to Bijāpur. An alternative route to Mahābaleshwar runs through Sātāra town, and there are numerous feeder roads for the railway.

Famine. The uncertain and scanty rainfall makes eastern Sātāra one of the parts of the Bombay Presidency most liable to suffer from failure of crops. The earliest recorded is the famous famine known as Durgā-devī, which, beginning in 1396, is said to have lasted twelve years, and to have spread over all India south of the Narbadā. Whole Districts were emptied of their inhabitants; and for upwards of thirty years a very scanty revenue was obtained from the territory between the Godāvari and the Kistna. In 1520, mainly owing to military disturbances, the crops in the Deccan were destroyed and a famine followed. In 1629–30 severe famine raged throughout the Deccan. The rains failed for two years in succession, causing great loss of life. According to local tradition, the famine of 1791–2 was the worst ever known. It seems to have come after a series of bad years, when the evils of scanty rainfall were aggravated by disturbances and war. The native governments granted large remissions of revenue, the export of grain was forbidden, and a sale price was fixed. Rice was imported into Bombay from Bengal. The famine of 1802–3 ranks next in severity. It was most felt in Khāndesh, Ahmadnagar, Sholāpur, Bijāpur, and Dhārwār; but it also pressed severely on Belgaum, Sātāra, Poona, Surat, and Cutch. This scarcity was mainly due to the ravages of Jaswant Rao Holkar and his Pindāris, who destroyed the early crops as they were coming to maturity and prevented the late crops being sown. This scarcity was followed by the failure of the late rains in 1803. The pressure was greatest in July and August, 1804, and was so grievous that, according to tradition, men lived on human flesh. Grain is said to have been sold at a shilling the pound. In 1824–5 a failure of the early rains caused considerable and widespread scarcity. In 1862 there was again distress on account of scanty rainfall.

The early rains of 1876 were deficient and badly distributed, and the crops failed, distress amounting to famine over about one-half of the District, the east and south-east portions suffering most. This was followed by a partial failure of the rains in September and October, when only a small area of late

crops could be sown. With high prices (millet at 8½ instead of 17½ seers per rupee) and no demand for field work, the poorer classes fell into distress. The need for Government help began about the beginning of October. The long period of dry weather in July and August, 1877, forced prices still higher, and caused much suffering; but the plentiful and timely rainfall of September and October removed all cause of anxiety. By the close of November the demand for special Government help had ceased. On May 19, 1877, when famine pressure was general and severe, 46,000 labourers were on relief works. The total cost of the famine was estimated at about 12 lakhs. In the eastern *tālukas* the number of cattle decreased from 994,000 in 1876-7 to 775,000 in 1877-8. In 1878 the cultivated area fell short of that in 1876 by about 18,400 acres.

In the famine of 1896-7 the District again suffered severely. In December, 1896, the number on relief works was 6,700. It rose to 27,000 in April, 1897, and then began to fall. The number on charitable relief was 5,000 in September, 1897. The last scarcity occurred in 1899-1900, when the late rains failed. The drought was specially marked in the region east of the Kistna river. Relief works were necessary in 1899. By May, 1900, 47,000 persons were on works, excluding 8,000 dependents and 2,000 in receipt of gratuitous relief. The latter number rose to 17,000 in September. The distress continued till October, 1901, owing to the capricious rainfall of 1900. The total cost of the famine was estimated at 16 lakhs, and the advances to agriculturists and remissions of land revenue amounted to 18 lakhs. It is calculated that there was a mortality of nearly 30,000 in excess of the normal, and that 200,000 cattle died.

District subdivisions and staff.

The Collector's staff usually includes three Assistants or Deputies. The District is divided into eleven *tālukas*: namely, KARĀD, VĀLVA, SĀTĀRA, WAI, JĀVLI, KHĀNĀPUR, KOREGAON, PĀTAN, MĀN, KHATAO, and TĀSGAON. The *tālukas* of Vālva and Wai include the petty divisions (*pethās*) of Shirāla and Khandāla, and Javli includes Malcolmpeth. The Collector is Political Agent for the Aundh and Phaltan States.

Civil and criminal justice.

The District and Sessions Judge is assisted for civil business by an Assistant Judge, one Subordinate Judge under the Dekkhan Agriculturists' Relief Act, and eight other Subordinate Judges. There are usually 34 magistrates to administer criminal justice. The usual forms of crime are hurt, theft,

and mischief. Dacoity is common in the southern portion of the District.

Land revenue administration.

Before the rise of the Marāthās and during their supremacy many surveys were made of parts or the whole of the Sātāra territory, apparently with the object of readjusting rather than of altering the assessment, which, under the name of *kamāl* or rack rental, had remained the same for years. No accurate account of the Bijāpur survey remains, but the standard of assessment was continued in some villages to the end of the Peshwās' rule (1818). When Sivajī took the country (1655) he made a new but imperfect survey on the model of Malik Ambar's, fixing two-fifths of the produce or its equivalent in money as the government share. The Mughals introduced the system of Todar Mal, fixing the assessment, not by measurement as in the districts conquered earlier, but by the average produce or its equivalent in money. In some cases Aurangzeb raised the rents for a few years as high as he could, and this amount was ever afterwards entered in the accounts as the *kamāl* or rack rental. In the time of Bālājī Bājī Rao some villages in Wai, Vālva, Khānāpur, and Kārad were measured, but do not seem to have been assessed. Bājī Rao II introduced the farming or contract system, for both revenue and expenditure. The contractors usually had civil and criminal jurisdiction, and treated the landholders with the greatest harshness. The result of the excessive bids made by the contractors to please Bājī Rao was that most villages were burdened with a heavy debt incurred on the responsibility of the headman and on behalf of the village. The first step after the establishment of the Sātāra Rājā in 1818 was to abolish the contract system and to revert to a strictly personal or *ryotwār* settlement; but the old and very heavy assessment remained. About 1822 the rates returned for good land varied from Rs. 18 to Rs. 1-2 per acre; for mixed land from Rs. 9 to 13½ annas; and for uplands from Rs. 2-4 to 4½ annas. The rate for garden land varied from Rs. 28 to Rs. 1-2. Between 1821 and 1829 Captain Adams surveyed all the lands of the State. The arable area was divided into numbers or fields, and the areas of all holdings and grants or *ināms* were fixed. When in 1848 the District was resumed by the British Government, the revenue survey was introduced, beginning with Tāsgaon in 1852-3, and comprising the whole of the District before 1883. A revision between 1888 and 1897 disclosed an increase in cultivation of 7,000 acres. The revised settlement raised the total land revenue from 11½ lakhs

to nearly 17 lakhs. Under the current survey settlement the average rate of assessment for 'dry' land is 15 annas, for rice land Rs. 3-14, and for garden land Rs. 3-9.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	23,82	23,94	22,18	29,43
Total revenue . .	29,79	29,55	27,50	36,17

Municipalities and local boards.

There are twelve municipalities in the District: SĀTĀRA CITY, WAI, RAHIMATPUR, KARĀD, ISLĀMPUR, ASHTA, TĀSGAON, VITA, MAYNI, MHASVĀD, MAHĀBALESHWAR, and SĀTĀRA SUBURBAN, with an aggregate income of 1½ lakhs. Local affairs outside these are managed by the District board and 11 local boards. The total receipts of these boards in 1903-4 was more than 2½ lakhs, the principal source of income being the Local fund cess; and the expenditure was a little less than that sum. Of the total expenditure, nearly one lakh, or 40 per cent., was laid out on roads and buildings in 1903-4.

Police and jails.

The District Superintendent of police is assisted by an Assistant Superintendent and two inspectors. There are 17 police stations and a total police force of 966, of whom 16 are chief constables, 196 head constables, and 754 constables. The mounted police number 7, under one *daffadār*. The District contains 19 subsidiary jails, with accommodation for 424 prisoners. The daily average number of prisoners during 1904 was 89, of whom 5 were females.

Education.

Sātāra stands nineteenth among the twenty-four Districts of the Presidency in the literacy of its population, of whom 4 per cent. (8 per cent. males and 0·3 females) could read and write in 1901. In 1865 there were 104 schools and 6,100 pupils. The number of pupils rose to 12,851 in 1881 and to 23,168 in 1891, but fell in 1901 to 22,146. In 1903-4 there were 352 public schools with 16,962 pupils, of whom 1,519 were girls, besides 47 private schools with 878 pupils. Of the 352 institutions classed as public, one is managed by Government, 282 by the local boards, and 36 by the municipal boards; 33 are aided and 2 unaided. The public schools include 3 high, 7 middle, and 342 primary schools. The total expenditure on education in 1903-4 was more than 1¾ lakhs. Of this, Local funds contributed Rs. 50,000, municipalities Rs. 10,000, and fees Rs. 25,000. About 74 per cent. of the total was devoted to primary schools.

Hospitals and dispensaries.

In 1904 the District possessed 2 hospitals and 9 dispensaries and 7 other medical institutions, with accommodation for 124 in-patients. About 106,960 persons were treated, including 818 in-patients, and 3,609 operations were performed. The total expenditure was Rs. 19,770, of which Rs. 11,370 was met from municipal and local board funds.

Vaccination.

The number of persons successfully vaccinated in 1903-4 was nearly 28,000, representing a proportion of 24 per 1,000 of population, which is almost equal to the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. xix (1885); W. W. Loch, *Historical Account of the Poona, Sātāra, and Sholāpur Districts* (1877).]

Wai Tāluka.—North-western *tāluka* of Sātāra District, Bombay, lying between 17° 48′ and 18° 11′ N. and 73° 38′ and 74° 13′ E., with an area, including the petty subdivision or *petha* of Khandāla, of 391 square miles. It contains one town, WAI (population, 13,989), the head-quarters; and 125 villages. The population in 1901 was 94,377, compared with 97,432 in 1891. The density, 241 persons per square mile, is almost equal to the District average. The demand for land revenue in 1903-4 was 1½ lakhs, and for cesses Rs. 14,000. Wai is surrounded and crossed in a number of directions by spurs of the Western Ghāts, while it is divided by the Mahādeo range into two portions belonging to the valleys of the Kistna and Nīra rivers. The Kistna valley is the more fertile of the two; the country near the river is well wooded, and the hills in parts are fairly clothed with trees. The other half, termed the Khandāla *petha*, is bare and slopes towards the Nīra, which separates it from Poona District. Land is watered from both wells and streams. Near the Kistna the soil is good, elsewhere it is poor. The annual rainfall averages slightly more than 33 inches.

Mān.—*Tāluka* of Sātāra District, Bombay, lying between 17° 27′ and 17° 56′ N. and 74° 17′ and 74° 53′ E., with an area of 629 square miles. It contains one town, MHASVĀD (population, 7,014), and 76 villages. The head-quarters are at Dahivadi. The population in 1901 was 64,889, compared with 62,857 in 1891. It is the most thinly populated *tāluka* in the District, having a density of only 103 persons per square mile. The demand for land revenue in 1903-4 was Rs. 92,000, and for cesses Rs. 7,000. The climate is decidedly hotter than the rest of the District, which is chiefly due to the low level of the *tāluka* and the fact of its being shut in on three sides by

hills. Towards the north-west the hills form picturesque groups, their highest peaks crowned by the Vārugarh and Tāthvāda forts; and to the east of Dahivadi is a fine gorge, traversed by streams. But, except for a sparsely-wooded tract near the Mān river, the country is barren, rocky, and desolate. The annual rainfall, which averages 20 inches at Dahivadi, is variable and scanty, and hardly suffices for the proper cultivation of the small area of black soil in the *tāluka*.

Jāvli.—Northern *tāluka* of Sātāra District, Bombay, lying between 17° 32′ and 17° 59′ N. and 73° 36′ and 73° 59′ E., with an area, including the petty subdivision (*petha*) of Malcolmpeth, of 423 square miles. It contains one town, Malcolmpeth or MAHĀBALESHWAR (population, 5,299); and 249 villages. The population in 1901 was 65,587, compared with 70,744 in 1891. The density, 155 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was Rs. 91,000, and for cesses Rs. 8,000. Throughout the hot season the Western Ghāt hill tracts, which form a large part of the *tāluka*, are cool and breezy. Medha, the *tāluka* head-quarters, has an average rainfall of 81 inches annually, while Mahābaleshwar receives 292 inches.

Sātāra Tāluka.—*Tāluka* of Sātāra District, Bombay, lying between 17° 30′ and 17° 50′ N. and 73° 48′ and 74° 10′ E., with an area of 339 square miles. It contains one town, SĀTĀRA (population, 26,022), the District and *tāluka* head-quarters; and 152 villages. The population in 1901 was 128,391, compared with 139,892 in 1891. The density, 379 persons per square mile, is the highest in the District. The demand for land revenue in 1903–4 was more than 1·9 lakhs, and for cesses Rs. 19,000. Sātāra includes the three valleys of the Kistna, Vena, and Urmodi rivers, which are open and slope gently from the base of steep and bare hills. Clumps of mangoes stud the valleys, and *babūl* grows plentifully on the banks of the Kistna. The soil near the rivers is rich and black, but grows gradually grey and poorer towards the hills. The climate is healthy, and the rainfall, averaging 40 inches, is higher than in most other *tālukas*.

Koregaon Tāluka.—*Tāluka* of Sātāra District, Bombay, lying between 17° 28′ and 18° 1′ N. and 74° and 74° 18′ E., with an area of 346 square miles. It contains 74 villages, including RAHIMATPUR (population, 6,735). The head-quarters are at Koregaon. The population in 1901 was 83,375 compared with 92,254 in 1891. The density, 241 persons per

square mile, is nearly equal to the District average. The demand for land revenue in 1903-4 was 2·2 lakhs, and for cesses Rs. 19,000. The country is comparatively flat in the south, but everywhere slopes gently from the hills. The eastern portion is generally raised and more barren. The climate is healthy, but the rainfall, which measures 30 inches annually at Koregaon, is precarious.

Khānāpur Tāluka.—*Tāluka* of Sātāra District, Bombay, lying between 17° 8′ and 17° 27′ N. and 74° 14′ and 74° 51′ E., with an area of 510 square miles. It contains 91 villages, including KHĀNĀPUR (population, 5,229) and VITA (5,035), the head-quarters. The population in 1901 was 86,049, compared with 95,931 in 1891. The density, 169 persons per square mile, is much below the District average. The demand for land revenue in 1903-4 was 1·6 lakhs, and for cesses Rs. 13,000. Khānāpur is an upland, rising more than 200 feet above the Karād valley on the west and the great plain of the Mān on the east. It is sparingly wooded, except near the feeders of the Yerla river, which crosses the *tāluka* from north to south on its way to join the Kistna. The climate is fairly temperate, save for occasional hot winds; but the rainfall, which measures only 24 inches annually, is uncertain, and water is often scarce in the hot season. The soil is either black or grey *murram* with its intermediate varieties.

Pātan Tāluka.—South-easternmost *tāluka* of Sātāra District, Bombay, lying between 17° 8′ and 17° 34′ N. and 73° 39′ and 74° 4′ E., with an area of 438 square miles. It contains 203 villages, but no town. Pātan is the head-quarters. The population in 1901 was 104,167, compared with 131,833 in 1891. The density, 238 persons per square mile, is the same as the average of the District. The demand for land revenue in 1903-4 was 1·2 lakhs, and for cesses Rs. 1?,000. Pātan is hilly. The chief feature in the west is the Koyna valley running south, with lofty flanking hills. On the east the valleys of the Koyna, Tārli, and Kole open into the plains of the Kistna. The soil of the eastern valleys is good, yielding both early and late crops, chiefly *jowār* and ground-nuts, and, when watered, sugar-cane. The rest of the soil is red, and, except in the hollows where rice and sometimes sugar-cane are grown, is under nomadic cultivation. The Koyna and the Tārli with their feeders furnish abundance of water to the villages on and near their banks. Away from the rivers, both on the tops of the hills and in the valleys, especially during March, April, and May, water is scarce. The climate is cool

and healthy in the hot season, but the chilly damp of the rains makes it feverish. Compared with the greater portion of the District the rainfall is heavy, averaging 67 inches annually.

Karād Tāluka.—*Tāluka* of Sātāra District, Bombay, lying between 17° 5′ and 17° 30′ N. and 74° and 74° 18′ E., with an area of 378 square miles. There is one town, KARĀD (population, 11,499), the head-quarters; and 98 villages, including KALE (5,077). The population in 1901 was 134,947, compared with 154,383 in 1891. The density, 357 persons per square mile, is much above the District average. The demand for land revenue in 1903–4 was 2·9 lakhs, and for cesses Rs. 24,000. The *tāluka* is a portion of the valley of the Kistna river, which runs 30 miles from north to south between two parallel chains of hills. The western chain is broken half-way by the Koyna, which joins the Kistna at Karād. The land is generally flat and open, but becomes rougher as it rises towards the hills. Gardens and groves and several charming river reaches lend a picturesque appearance to the country. The soil is extremely fertile. In the cold season the days are warm and the nights bitterly cold, and in the hot season Karād is one of the hottest parts of the District. The annual rainfall averages 30 inches.

Khatao.—*Tāluka* of Sātāra District, Bombay, lying between 17° 18′ and 17° 48′ N. and 74° 14′ and 74° 51′ E., with an area of 501 square miles. There are 85 villages, but no town. The head-quarters are at Vadūj. The population in 1901 was 96,416, compared with 95,223 in 1891. The density, 241 persons per square mile, is almost equal to the District average. The demand for land revenue in 1903–4 was 1·4 lakhs, and for cesses Rs. 12,000. Khatao is a northerly continuation of the Khānāpur plateau, and consists of the valley of the Yerla, which, rising at the northern point of the *tāluka*, flows southward through it. Of the two ranges of hills which enclose the valley, the western range is the higher, while the eastern rises but little above the Khatao upland. The rainfall, which averages 20 inches annually at Vadūj, is scanty and fitful; but the climate is fairly healthy.

Vālva Tāluka.—South-western *tāluka* of Sātāra District, Bombay, lying between 16° 51′ and 17° 16′ N. and 73° 42′ and 74° 29′ E., with an area, including the petty subdivision or *petha* of Shirāla, of 545 square miles. It contains two towns, URUN-ISLĀMPUR (population, 11,553), the head-quarters, and ASHTA (12,409); and 134 villages, including NERLA (7,524), PETH (6,820), BORGAON (5,498), BĀGNI (5,641), VĀLVA (5,525),

KĀSEGAON (5,482), and KAMERI (5,052). The population in 1901 was 195,949, compared with 192,255 in 1891. The density, 359 persons per square mile, is above the District average. The demand for land revenue in 1903–4 was 4·1 lakhs, and for cesses Rs. 33,000. The *tāluka* consists of two parts, the Kistna and lower Vārna valley in the east, and the upper Vārna valley in the west. The lower valley is a black-soil plain, the upper valley is hilly, and in the extreme west has some of the densest forests in the District. Much of the east is one great garden, adorned by mango groves.

Tāsgaon Tāluka.—*Tāluka* of Sātāra District, Bombay, lying between 16° 48′ and 17° 13′ N. and 74° 24′ and 74° 58′ E., with an area of 325 square miles. It contains one town, TĀSGAON (population, 10,975), the head-quarters; and 48 villages, including BHILAVDI (7,651) and PĀLUS (5,070). The population in 1901 was 92,412, compared with 93,185 in 1891. The density, 284 persons per square mile, is somewhat above the District average. The demand for land revenue in 1903–4 was 1·6 lakhs, and for cesses Rs. 13,000. The south-east is interspersed with many patches of Sāngli and Mirāj States. The whole of the *tāluka* is rather low, especially the land near the meeting of the Yerla and the Kistna. The northern and eastern portions are rocky and barren, crossed by ranges of low hills which branch from the Khānāpur plateau. The west and south-west on and near the great rivers form a continuation of the rich plain of the eastern Vālva, and like it are well wooded with mango and *babūl*. The only important rivers are the Kistna, forming the western boundary, and the Yerla, which enters the *tāluka* from the north. Near the Kistna and Yerla the soil is rich black; towards the north-east it is rocky and barren. The annual rainfall at Tāsgaon town averages 25 inches. It is slighter and more variable in the east of the *tāluka*.

Ashta.—Town in the Vālva *tāluka* of Sātāra District, Bombay, situated in 16° 57′ N. and 74° 25′ E., on the right bank of the Kistna river, and on the main road from Mirāj to Sātāra, 20 miles north-west of the former, and 61 miles south-east of the latter. Population (1901), 12,409. Ashta is an agricultural town, with a weekly market, and an annual fair held in June, when about 5,000 persons assemble. It has been a municipality since 1853. During the decade ending 1901 the income averaged Rs. 5,000. In 1903–4 the income was Rs. 3,200. The town contains an English school and a dispensary.

Bāgni.—Village in the Vālva *tāluka* of Sātāra District, Bombay, situated in 16° 55′ N. and 74° 26′ E., 4 miles south-west of Ashta. Population (1901), 5,641. Bāgni is a large agricultural village alienated to the junior branch of the Mantri family, the senior branch of which lives at Islāmpur. The village, which contains a fortified citadel, encompassed by lofty walls and a deep moat, was formerly an outpost of the Bijāpur kingdom. The relics of Muhammadan rule include a handsome mosque to the east of the village, and a mausoleum covered with a fine brocade presented by the Mantri family.

Bhilavdi (*Bhilaudi*).—Village in the Tāsgaon *tāluka* of Sātāra District, Bombay, situated in 16° 59′ N. and 74° 28′ E., on the left bank of the Kistna, facing the village of Akalkhop, 9 miles west of Tāsgaon. Population (1901), 7,651. There is a large export trade in *ghi*, and the inhabitants are in comfortable circumstances. Near by is a temple of Bhavaneshwari, which is reputed to work miraculous cures. The village contains a good primary school.

Borgaon.—Village in the Vālva *tāluka* of Sātāra District, Bombay, situated in 17° 5′ N. and 74° 23′ E., 5½ miles north-east of Islāmpur and 5 miles north-west of Vālva. Population (1901), 5,498. It is a large agricultural village on the right bank of the Kistna. To the north, adjoining the river, is an interesting modern temple with round-arched cloisters of brick covered with mortar. The land in the neighbourhood includes some of the finest Kistna valley black soil.

Kāle.—Village in the Karād *tāluka* of Sātāra District, Bombay, situated in 17° 14′ N. and 74° 13′ E., 31 miles south-by-east of Sātāra city. Population (1901), 5,077. Near it lie the Agashiv caves, the oldest Buddhist caves in the District.

Kameri.—Village in the Vālva *tāluka* of Sātāra District, Bombay, situated in 17° N. and 74° 19′ E. Population (1901), 5,052. The village, which lies on the main road to Kolhāpur, had formerly a large Muhammadan population. Old tombs and ruined mosques may still be seen, while within its limits is a tank designed to supply water to Islāmpur.

Karād Town (*Karhād*, originally *Karahākada*).—Head-quarters of the *tāluka* of the same name in Sātāra District, Bombay, situated in 17° 17′ N. and 74° 11′ E., at the confluence of the Koyna and Kistna, on the Bombay-Madras high road, 31 miles south-south-east of Sātāra city, and about 4 miles south-west of Karād Road on the Southern Mahratta

Railway. Population (1901), 11,499. The town was constituted a municipality in 1885. During the decade ending 1901 the income averaged Rs. 10,500. In 1903-4 the income was Rs. 12,000. It is referred to in ancient writings as Karahākada, and has given its name to a subdivision of Brāhmans. In the north-east is an old mud fort containing the mansion of the Pant Pratinidhi, the most noteworthy objects in which are an audience-hall with an ornamental ceiling of teak and iron, built about 1800, and a curious step-well. The mosque of Karād is interesting, as it contains nine Arabic inscriptions. One of these shows that it was built during the reign of the fifth Bijāpur king, Alī Adil Shāh (1557-79), by one Ibrāhīm Khān. About 3 miles to the south-west is a group of 54 Buddhist caves of a very plain and early type. The town contains a Subordinate Judge's court, a dispensary, and an English school.

Kāsegaon.—Village in the Vālva *tāluka* of Sātāra District, Bombay, situated in 17° 8′ N. and 74° 14′ E., close to the Sātāra-Kolhāpur road, 11 miles south of Karād and 4 miles north of Peth. Population (1901), 5,482. This is one of the most thriving places in the *tāluka*. It is inhabited by well-to-do merchants, who traffic with the coast in local produce, chiefly tobacco, pepper, and sugar-cane. The inhabitants have an unenviable character for crime and litigiousness—mischief to crops, cattle poisoning, and arson having been very frequent for many years.

Khānāpur Village.—Village in the *tāluka* of the same name in Sātāra District, Bombay, situated in 17° 15′ N. and 74° 43′ E., about 10 miles east of Vita. Population (1901), 5,229. From its proximity to the fort of Bhopālgarh it was probably in early times the administrative head-quarters of the surrounding country. The town has stone and mud walls, now much decayed, and gates at the north-west and east flanked with bastions. Within the village is an old mosque, containing the tomb of a female saint, supposed to have been the daughter of one of the Bijāpur Sultāns. The mosque contains two inscriptions, in Arabic and Kanarese.

Mahābaleshwar (or Malcolmpeth).—Principal sanitarium of the Bombay Presidency, situated in 17° 56′ N. and 73° 40′ E., in the Jāvli *tāluka* of Sātāra District. Mahābaleshwar occupies the prolonged, and in places almost level, summit of a range of the Western Ghāts, from which it takes its name, with a general elevation of 4,500 feet above sea-level, rising at points to 4,700 feet. It is reached from Bombay by the Great Indian

Peninsula Railway to Poona (119 miles), and thence by the Southern Mahratta Railway to Wathār station, from which it is 39 miles distant. An alternative but little used route conveys travellers by steamboat from Bombay to Dāsgaon, near the mouth of the Sāvitrī river, from which a fine road leads (35 miles) across the intermediate plain and up the *ghāt* to Mahābaleshwar. Population (1901), 5,299, excluding 438 in the village of Mahābaleshwar, 3 miles from the station, which is officially known as Malcolmpeth.

Mahābaleshwar combines all the conditions requisite for a first-class sanitarium: easy access for invalids from the great centres of Bombay and Poona, ample level space for carriage exercise at the top of the hill, an excellent water-supply, picturesque scenery, and proximity to the fresh sea-breeze. It was established in 1828 by Sir John Malcolm, Governor of Bombay, who obtained the site from the Rājā of Sātāra in exchange for another patch of territory. The superior elevation of Mahābaleshwar (4,500 feet) renders it much cooler than the rival sanitarium of Mātherān in Kolāba District (2,460 feet), but its heavy rainfall makes it uninhabitable during the rainy season. The monsoon strikes this outlying range of the Ghāts with its full force, and deposits on their slope the main portion of its aqueous burden.

Mahābaleshwar forms the retreat during spring and autumn of the Governor of Bombay and the chief officials of his Government. It is also a popular resort for visitors from Bombay and Poona and the surrounding Districts. The favourite season is from March to June, the object being to escape from the intense heat of the plains. But this is not the time of year when Mahābaleshwar is most beautiful, as then the streams and waterfalls are dry, the verdure parched, and the magnificent view obstructed by haze and glare. As soon as the first burst of the summer monsoon occurs, about June, the visitors, residents, and shopkeepers leave the station *en masse* and only a few of the poor classes remain. On the cessation of the monsoon, in October, visitors return to Mahābaleshwar, which is then seen at its best. Beautiful ferns of many varieties are in full leaf, and many spots are completely carpeted with wild flowers, moss, and grasses. The streams are full, the Venna Falls forming an imposing cascade, while the faces of the cliffs are lighted up with innumerable silver rills and dazzling sprays. Except during the south-west monsoon, Mahābaleshwar is at all times most attractive, one of its principal charms being the excellent drives and walks in all

directions. The principal points are: Arthur's Seat (4,421 feet), Elphinstone (4,184), Sidney or Lodwick (4,067), Bombay, Carnac, Falkland, Sassoon, and Babington (4,245) on the Konkan face, and Kate's Point on the Deccan side. The places in the neighbourhood of the hill to which excursions are occasionally made are Pratāpgarh, Makarandgarh (the saddle-back hill), Kamalgarh, the Robbers' Caves, and the source of the Kistna. A temple of Mahābaleshwar, which gives its name to the station, is situated 4,385 feet above sea-level in a small village 3 miles north of the bazar. The village is regarded by Hindus as a holy place or *tīrth*. Close by is another temple of Krishna Bai, where the Kistna river takes its source.

Mahābaleshwar proper is a municipality under the administrative charge of a Superintendent, who is usually a member of the Indian Medical Service. From the success attending the cultivation of cinchona on the Nīlgiris and in some of the hill stations in Bengal, the Government of India in 1864 established a garden, consisting of about 95 acres, on the eastern side of the hill; but this experimental cultivation having proved a complete failure, after an expenditure of Rs. 64,000, the land, with a bungalow erected thereon, was in 1876 handed over to the Forest department. Owing to the temperate climate, many varieties of flowers, fruit, and vegetables common in Europe can be grown, among which may be noted excellent strawberries. Mahābaleshwar has the usual public buildings of a first-class sanitarium—church, clubs, library, hotel, telegraph and post office, &c. The bazar or general market occupies a central position in the station, and supplies of every description can be obtained. The Frere Hall, a handsome building constructed in 1864, contains a large reading-room with a well-assorted library. There are several hotels and numerous bungalows, occupied by both Europeans and natives. The population varies according to the time of the year; but the permanent population of the 65 villages comprising Malcolmpeth and also Mahābaleshwar was returned in March, 1901, at 5,737. No returns are available showing the population at the height of the season. The hospital is in charge of a Civil Surgeon, who also acts as Superintendent of the station and Assistant to the Collector at Sātāra. The municipality, established in 1867, had an income during the decade ending 1901 averaging Rs. 19,000. In 1903-4 the income was Rs. 22,000, derived chiefly from house rent (Rs. 6,600), octroi (Rs. 3,000), tax

on animals and vehicles (Rs. 2,100), and a conservancy tax (Rs. 2,000).

The average annual mean temperature of Mahābaleshwar Hill is 67°. In November, December, and January, the coldest months, the temperature averages 63°, rising to a mean of 67° in February, when the cold season ends. The hottest time of the year is from about the middle of March to the middle of April, when during the day the temperature rises to a little over 90°. Towards the end of April invigorating sea-breezes set in from the west, which gather strength as the season advances. Occasional showers occur in May, and the monsoon usually sets in early in June, attaining its maximum force in July, when 12 inches or even more of rainfall are occasionally registered in a single day. The annual rainfall averages 292 inches.

Māyni.—Town[1] in the Khatao *tāluka* of Sātāra District, Bombay, situated in 17° 26′ N. and 74° 35′ E., 40 miles south-east of Sātāra city. Population (1901), 5,312 (including 1,622 persons returned in a famine relief camp). The municipality, which was established in 1867, had an income during the decade ending 1901 averaging Rs. 1,400. In 1903–4 the income was Rs. 1,650. The small stream on which Māyni stands has been dammed about a mile to the east, to increase the water-supply of the inhabitants as well as for irrigation purposes.

Mhasvād.—Town in the Mān *tāluka* of Sātāra District, Bombay, situated in 17° 38′ N. and 74° 48′ E., 51 miles east of Sātāra city, on the road to Pandharpur. Population (1901), 7,014. Six miles south-east of the town, at Rājewādi in Aundh State, is the great Mhasvād irrigation lake, covering an area of 6 square miles. An ancient temple of Nāth stands near the western entrance of the town. Its courtyard, in which Purānas are read daily by a Brahmān, contains an inscription and a black stone elephant, which is greatly venerated. A large fair is held in December, at which cattle and blankets are sold. The municipality, constituted in 1857, had an income during the decade ending 1901 averaging Rs. 4,700. In 1903–4 the income was Rs. 5,300. The town contains a dispensary.

Nerla.—Village in the Vālva *tāluka* of Sātāra District, Bombay, situated in 17° 5′ N. and 74° 16′ E., 44 miles south-by-east of Sātāra city. Population (1901), 7,524.

Pāl (originally called Rājāpur).—Village in the Karād

[1] Māyni was not treated as a town at the Census of 1901.

tāluka of Sātāra District, Bombay, lying on both banks of the Tārli in 17° 29′ N. and 74° 2′ E., about 20 miles north-west of Karād town. Population (1901), 3,157. It is chiefly remarkable for a temple of Khandoba, where a fair attended by about 50,000 people of all classes is held every year. The temple, which was built in the fifteenth century, stands on the site of a legendary appearance by the god Khandoba to a favourite devotee, a milkmaid named Pālai, in whose honour the village name was changed from Rājāpur to Pāl. The number of prominent historical families in the Deccan who have bestowed gifts on this temple shows the great veneration in which it is held. Every pilgrim entering the temple at the fair time has to pay a toll of ¼ anna. The priests are Guravs and Brāhmans, and connected with the temple are many Murlis or female devotees. The great fair is held in the month of Paush or December–January. The pilgrims usually camp in the bed of the Tārli, which at this time forms a large dry beach. The fair proper lasts three or four days, being the days during which the marriage ceremony of the god Khandoba is supposed to take place. Under Marāthā rule Pāl was a market town of some note on the main road from Sātāra to Karād. Pāl village and temple are closely connected with a celebrated exploit of Chitursing in February, 1799, in revenge for the defeat of his brother Sāhū II, the Sātāra Rājā. After worshipping at the temple with his small force of 600 infantry, he attacked Rāstia, who was encamped near Sātāra with a body of 2,000 or 3,000 men, and dispersed them.

Pālus.—Village in the Tāsgaon *tāluka* of Sātāra District, Bombay, situated in 17° 5′ N. and 74° 31′ E., on the Karād-Tāsgaon road, about 10 miles north-west of Tāsgaon town. Population (1901), 5,070. The place consists of one broad market street and a few small lanes. The Kistna canal ends in the surrounding lands. The soil is rich, and sugar-cane is abundantly grown in the irrigated, and a good deal of cotton in the unirrigated fields.

Pānchgani.—Sanitarium in the Wai *tāluka* of Sātāra District, Bombay, situated in 17° 55′ N. and 74° 48′ E., on the Surul-Mahābaleshwar road, 4,378 feet above sea-level, about 10 miles west of Wai and 11 miles east of Mahābaleshwar. Population (1901), 1,312. The village lies with five others on a spur of the Western Ghāts, which juts out at Mahābaleshwar and terminates about a mile from Wai. Situated to the lee of Mahābaleshwar and about 200 feet lower, it escapes the heavy

rain and mist of the outer range, which are carried away into the valleys to the north and south. It is also happily shielded from the east wind, by being built under a large extent of table-land. The magnificent scenery of the Kistna valley, extending for many miles from east to west, with its numerous hamlets, highly cultivated fields, and picturesque river, can be seen along the whole northern ridge of the mountain. Though less extensive, the southern aspect is even more beautiful.

Considered as a sanitarium, Pānchgani stands almost unrivalled. With a temperature like that of Mahābaleshwar, it has the advantage over that charming health resort of being comfortably habitable throughout the year. The climate is cool, salubrious, and comparatively dry. The annual rainfall averages 56 inches, or about a fifth of that of Mahābaleshwar. The temperature varies from 55° at 6 a.m. in December to 96° at 2 p.m. in March. The mean temperature at noon is 71° and the mean daily range only 6°. The European settlement was founded by private enterprise, chiefly through the energy and zeal of the late Mr. John Chesson, who, in 1854, began farming here on a small scale. By 1862 there were six substantial houses built by Europeans, and a yearly grant of Rs. 2,000 was made to the station by Government in that year.

The station is managed by a Superintendent with magisterial powers, and contains, besides his office, a market, an unaided high school for European and Eurasian boys, two aided schools for European and Eurasian girls, and a dispensary. The high school, which is managed by a committee in connexion with the Diocesan Board of Education, was originally opened in 1876, and reopened in 1880 by the Bishop of Bombay. This school is the only one of its sort permanently located in the Western Ghāts for European boarders. Nurseries are attached to the station, where experiments have been made in planting exotic and other trees and shrubs and in cultivating English potatoes, which, with the peach, the pear, and the blackberry, thrive in the mild climate. The coffee of Pānchgani has been favourably reported on by London brokers. Here, too, the heliotrope and myrtle grow in wild profusion. The sweet-brier, so rarely met with in India, flowers; and the eye of the traveller from the dusty plains below is gladdened with the sight of lanes bordered with festoons of hedge-roses and honeysuckle. Pānchgani, always beautiful, is at its best in August and September, when the fairy pimpernel, the butter-cup, and the wild sweet-pea cover the hill-side, while the

springy turf of the table-lands is thickly carpeted with the velvety blue-bonnet and the more delicate star-grass.

Pāndavgarh (or Pāndu Fort).—Fort in the Wai *tāluka* of Sātāra District, Bombay, situated in 18° N. and 73° 45′ E., 4,177 feet above sea-level, 4 miles north-west of Wai. The fort is said to have been built by the Kolhāpur Silāhāra chief, Bhoj II (1178–93) of Panhāla. About 1648 it is mentioned as being in the charge of a Bijāpur *mokāsdār* stationed at Wai. In 1673 it was taken by Sivajī. In 1701 Pāndavgarh surrendered with Chandan Vandan to Aurangzeb's officers. In 1713 Bālājī Viswanāth, afterwards the first Peshwā, though closely pursued by Chandrasen Jādhav, the Marāthā general or Senāpati, managed to reach Pāndavgarh. He was besieged here for a time by Chandrasen Jādhav's troops, who were withdrawn when Rājā Sāhū ordered an advance on Sātāra. During Trimbakjī Denglia's insurrection in 1817, Pāndavgarh was taken by the insurgents. It surrendered in April, 1818, to a detachment of the 9th Native Infantry Regiment under Major Thatcher. There are a few rock-cut caves at Pāndavgarh, situated on a small south-east projection of the fort within the limits of Dhāvdi village.

Parli Fort (or Sajjangarh).—Fort in the District and *tāluka* of Sātāra, Bombay, situated in 17° 40′ N. and 73° 55′ E., on a detached spur of the Western Ghāts, about 6 miles west of Sātāra city, and 1,045 feet above the plain. Population (1901), 1,287. The fort was built by one of the kings of Delhi in the thirteenth century. Parli was the favourite residence of Rāmdās Swāmi (1608–81), the spiritual guide or *gurū* of Sivajī (1627–80), who gave it to the Swāmi in *inām*. The local tradition is that, if Sivajī in Sātāra required counsel from Rāmdās, the Swāmi reached Sātāra through the air in a single stride. The temple of Rāmdās is in the middle of the village, surrounded by the dwellings of his disciples. The temple of basalt with a brick-and-mortar dome was built by Akā Bai and Divākar Gosavi, two disciples of the Swāmi. A yearly fair, attended by about 6,000 people, is held in February. On the north-west of Parli village are two old Hemādpanti temples. The existence of these makes it probable that a fort had been constructed before Musalmān times. It was subsequently occupied by them, and surprised by a detachment of Sivajī's Māvalis in May, 1673. A few days before his death in 1681 Rāmdās Swāmi addressed from Parli a judicious letter to Sambhājī, advising him for the future rather than upbraiding him for the past, and pointing

out the example of his father, yet carefully abstaining from personal comparison. In 1699, when the Mughals were besieging Sātāra, Parshurām Trimbak Pratinidhi prolonged the defence by furnishing supplies from Parli. After the capture of Sātāra in April, 1700, the Mughal army besieged Parli. The siege lasted till the beginning of June, when the garrison evacuated the fortress. Aurangzeb renamed it Naurastāra. In a revenue statement of about 1790 Parli appears as the head-quarters of a *pargana* in the Nahisdurg *sarkār*, with a revenue of Rs. 22,500. In 1818 it was taken by a British regiment.

Pratāpgarh.—Fortress in the Jāvli *tāluka* of Sātāra District, Bombay, situated in 17° 55′ N. and 73° 35′ E., 8 miles south-west of Mahābaleshwar, on a summit of the Western Ghāts commanding the Pār *ghāt*, and dividing one of the sources of the Sāvitrī from the Koyna, an affluent of the Kistna. The fort, 3,543 feet above sea-level, looks from a distance like a round-topped hill, the walls of the lower fort forming a sort of band or crown round the brow. The western and northern sides are gigantic cliffs, with an almost vertical drop in many places of 700 or 800 feet. The towers and bastions on the south and east are often 30 to 40 feet high, while there is in most places a scarp of naked black rock not much lower. In 1656 Sivajī, the founder of the Marāthā power, selected this almost impregnable position as one of his principal forts. Pratāpgarh was the scene of his treacherous murder of the Muhammadan general Afzal Khān, who had been sent against him by the Sultān of Bijāpur. In 1659 Sivajī decoyed Afzal Khān to a personal interview by a pretended submission, the two leaders being each attended by a single armed follower. Sivajī stabbed the Musalmān general, and gave the signal to his ambushed army to attack the Muhammadan troops, who, bewildered by the loss of their chief, were utterly routed. In the Marāthā War of 1818 Pratāpgarh was surrendered to the British by private negotiation, though it was an important stronghold and was held by a large garrison.

Peth.—Former head-quarters of the Vālva *tāluka* of Sātāra District, Bombay, situated in 17° 3′ N. and 74° 14′ E., 45 miles south-east of Sātāra city. Population (1901), 6,820. Peth is a local trade centre, the chief articles of trade being grain and cattle. A yearly fair attended by about 5,000 people is held in February.

Rahimatpur.—Town in the Koregaon *tāluka* of Sātāra

District, Bombay, situated in 17° 36′ N. and 74° 12′ E., 17 miles south-east of Sātāra city, on the Southern Mahratta Railway. Population (1901), 6,735. A weekly market is held on Thursday and Friday. Rahimatpur is a large trading centre. Bombay and English piece-goods, twist and silk, salt, coco-nuts, dates, and spices are imported; raw sugar, turmeric, earth-nuts, and coriander seed are exported. The chief objects of interest are a mosque and a mausoleum. The mausoleum seems to have been built in honour of Randullah Khān, a distinguished officer who flourished in the reign of the seventh Bijāpur Sultān, Muhammad (1626–56). About a hundred yards south-east of the mosque is an elephant water-lift—a tower about 50 feet high, with an inclined plane on the west, which supplied power for the mosque fountain. The municipality was established in 1853. During the ten years ending 1901 the income averaged Rs. 3,700. In 1903–4 the income was Rs. 3,100. The town contains a Sub-Judge's court and a dispensary.

Sātāra City.—Head-quarters of Sātāra District, Bombay, situated in 17° 41′ N. and 74° E., 10 miles from Sātāra Road station on the Southern Mahratta Railway, near the confluence of the Kistna and the Vena. The strong fort of Sātāra is perched on the summit of a small, steep, rocky hill. It takes its name from the seventeen (*sātārā*) walls, towers, and gates which it is supposed to have possessed. At the close of the war with the Peshwā in 1818, it fell, after a short resistance, into the hands of the British, but was restored with the adjacent territory to the representative of Sivaji's line, who, during the Peshwā's ascendancy, had lived there as a State prisoner. In 1848, on the death of the last Rājā, the principality escheated to the British. The town, lying at the foot of the hill fortress, consisted in 1820 of one long street of tiled houses, built partly of stone and partly of brick. After the breaking up of the Rājā's court, the population considerably decreased. But Sātāra is still a large place, with a population in 1901 of 26,022, including 2,917 in suburban and 990 in cantonment limits. Hindus numbered 21,795, Muhammadans 3,275, Jains 253, and Christians 599. The municipality, established in 1853, had an average income during the decade ending 1901 of Rs. 69,000. In 1903–4 the income was Rs. 60,000. The suburban municipality, established in 1890, had an average income during the decade ending 1901 of Rs. 7,400. In 1903–4 the income was Rs. 8,000. Sātāra has few large or ornamental buildings, with the exception of the

Rājā's palace now used as the Judge's court. On account of its high position, 2,320 feet above sea-level, the climate is unusually pleasant. The water-supply is obtained by aqueducts and pipes from the Kas lake in the hills, 16 miles from the city. A civil hospital is situated here.

Tāsgaon Town.—Head-quarters of the *tāluka* of the same name in Sātāra District, Bombay, situated in 17° 2′ N. and 74° 36′ E., on the Southern Mahratta Railway. Population (1901), 10,975. The town stands on rising ground, on the north bank of a stream which flows into the Yerla about 4 miles to the south-west. It was originally surrounded by walls, now ruined, and was entered by four gates. Within stands the mansion of the Patvardhan family, likewise enclosed by walls and three fortified gates, of which the northernmost was blocked up in 1799 on the death of Parasu Rāma Bhau, the greatest of the Patvardhans. A fine temple of Ganpati, about a century old, stands at a little distance from the mansion. The municipality, constituted in 1867, had an average income during the decade ending 1901 of Rs. 7,800. In 1903–4 the income was Rs. 7,700. The town contains a Subordinate Judge's court, an English school, and a dispensary.

Urun-Islāmpur.—Head-quarters of the Vālva *tāluka* of Sātāra District, Bombay, situated in 17° 3′ N. and 74° 16′ E., 48 miles south-south-east of Sātāra city, and 3 miles east of Peth. Population (1901), 11,553. The municipality, which was established in 1853, had an average income during the decade ending 1901 of Rs. 7,600. In 1903–4 the income was Rs. 6,300. The town consists of two distinct portions: Islāmpur, at one time a Musalmān colony; and Urun, the Hindu and older quarter. The latter contains the shrine of Shambhuappa Koshti, a Hindu devotee of the weaver caste, who performed many miracles and in whose honour a charity dinner is given in March to all comers. A fair is also held. Islāmpur has a dispensary.

Vālva Village.—Former head-quarters of the *tāluka* of the same name in Sātāra District, Bombay, situated in 17° 2′ N. and 74° 22′ E., on the right bank of the Kistna, 11 miles east of Peth and 7 miles east of Islāmpur. Population (1901), 5,525. A municipality was established at Vālva, but abolished in 1873 owing to the smallness of its income. Except the mansion of the Thorāt family of *deshmukhs*, the place has no remarkable buildings. The family first came into notice under Rājā Sāhu (1708–49) and was confirmed in the *deshmukhi* of villages

extending up to Shirāla, besides receiving military grants of several large and productive tracts. The *deshmukhi* dates from the Musalmāns. This family must not be confounded with that of the great Dhanājī Rao, with which it is but distantly connected. In October, 1659, Sivajī took Vālva after capturing Shirāla. The first Pratinidhi, Rāmchandra Pant Amātya, repopulated it about 1690. In 1684 the district was occupied during the monsoon by a Mughal army under Sultān Muazzam, who cantoned on the banks of the Kistna. It was then annexed by Sambhājī to Kolhāpur, and suffered greatly from the ravages of Udājī Chauhān. The Pant Pratinidhi surprised the camp of Sambhājī and Udājī. Jaswant Rao Thorāt was killed in the engagement, and they were driven to Panhāla with the loss of all their baggage. This occasioned the cession to the Sātāra Rājā of the Vālva district north of the Vārna. The charge of the district continued in the Thorāt family till the British annexation in 1818.

Vāsota.—Hill fort in the Jāvli *tāluka* of Sātāra District, Bombay, situated in 17° 40′ N. and 73° 42′ E., 5 miles west-north-west of Tāmbi, at the head of a small valley which branches west from the Koyna river. At the mouth of the valley is a village named Vāsota. Population (1901), 121. The fort itself is within the limits of Met Indoli village, and on the very edge of the Western Ghāts. The defences consist of a vertical scarp varying in height from 30 to 60 feet, crowned by a wall and parapet from 6 to 8 feet high and loopholed at intervals. The cliff to the south of the fort has a sheer drop of 1,500 feet, if not more. It is known as the Babukhada, and was used as a place of execution for criminals, who were hurled down the cliff. The fort of Vāsota is the most ancient in the hill districts. It is attributed to the Kolhāpur Silāhāra chief, Bhoj II (1178–93) of Panhāla; and, from the cyclopean blocks of unmortared trap which form the pond and older portions of the wall, it appears undoubtedly to be of great antiquity. The gateway looks Muhammadan, but it is doubtful whether any Musalmān ever came so far. The Shirkes and Mores possessed the fort, till it was taken by Sivajī in 1655 after the murder and conquest of the Jāvli chief. Sivajī named the fort Vajragarh, which name it has not retained. Subsequently it was chiefly used as a state prison. Soon after the battle of Kirkee (November 5, 1817) two British officers who had been captured at Uruli about 15 miles east of Poona after a manful resistance were sent first to Kāngori fort in Kolāba, where they were harshly treated, and thence to Vāsota. The British force

advancing from Medha by Bāmnoli and Tāmbi, drove in outposts at Vāsota, and met the Peshwā's forces at Indoli. Negotiations were opened with the commandant, one Bhāskar Pant, but he obstinately refused to surrender. The British forces then advanced a detachment and dug shelters for themselves in the hill-side. A battery was set up on the old fort, and the bombardment lasted for twenty hours. The commandant finally surrendered on April 6, 1818; and the two British officers were recovered uninjured. Mountstuart Elphinstone was present at the siege, which he has described. The prize property amounted to about 2 lakhs, in addition to family jewels of the Sātāra Rājā worth 3 lakhs.

Vita.—Head-quarters of the Khānāpur *tāluka* of Sātāra District, Bombay, situated in 17° 16′ N. and 74° 32′ E., 48 miles south-east of Sātāra city. Population (1901), 5,035. Vita, which is surrounded by walls of mud and stone, has been a municipality since 1854, with an average municipal income during the decade ending 1901 of Rs. 2,700. In 1903–4 the income was Rs. 3,700. An ancient mansion on the east wall is now used as a *gānja* warehouse. The town contains a Subordinate Judge's court.

Wai Town.—Head-quarters of the *tāluka* of the same name in Sātāra District, Bombay, situated in 17° 57′ N. and 73° 54′ E., on the Kistna river, 20 miles north-by-west of Sātāra city, and 15 miles east of Mahābaleshwar. Population (1901), 13,989. Wai is one of the most sacred places on the Kistna, and has a large Brāhman population. The caves in the neighbourhood show that it was an early Buddhist settlement, and it is locally identified with the Vairātnagar visited by the Pāndavas during their exile. Between 1453 and 1480 Wai was a military post of the Bahmani Sultāns, and supplied troops for Mahmūd Gawan's expedition to the Konkan. In 1648 the town was the head-quarters of a Bijāpur official; in 1659 it passed into the hands of the Marāthās, and in 1687 witnessed the defeat of a Bijāpur force dispatched to storm it. Save for a short period of reoccupation by the Muhammadans in 1690, Wai remained a Marāthā possession, and was occupied in 1753 on behalf of the Peshwā by Rājārām's widow, Tāra Bai. In 1791 it belonged to the Raste family, and in 1798 was the scene of Parasu Rāma Bhau Patvardhan's incarceration. It was mentioned in 1827 as 'a town formerly belonging to the Rastes and still their residence.' The face of the Kistna river for half a mile is lined with steps or *ghāts*, and for an hour after dawn and before sunset people are incessantly

engaged in ablutions and clothes-washing. Wai is a commercial centre and also a place of pilgrimage. The municipality, which was established in 1855, had an average income during the decade ending 1901 of Rs. 12,000. In 1903-4 the income was Rs. 14,000. Wai contains many temples, a high school with 153 pupils, a Subordinate Judge's court, and a dispensary. In the adjacent village of Lohāre are some interesting Buddhist caves.

Boundaries, configuration, and hill and river systems.

Sholāpur District.—District in the Central Division of the Bombay Presidency, lying between 17° 8′ and 18° 33′ N. and 74° 37′ and 76° 26′ E., with an area of 4,541 square miles. Except the Bārsi *tāluka*, which is surrounded by the Nizām's territory, Sholāpur is bounded on the north by Ahmadnagar District; on the east by the Nizām's Dominions and the State of Akalkot; on the south by Bijāpur District and the States of Jath and Mirāj; and on the west by Aundh State, Sātāra District, Phaltan State, and Poona and Ahmadnagar Districts. On the west, in some places Mirāj villages are included, and isolated Sholāpur villages lie beyond the District limits.

Except north of Bārsi, west of Mādha, and south-west of Mālsiras and of Karmāla, where there is a good deal of hilly ground, the District is generally flat or undulating. Most of the surface rolls in long low uplands separated by hollows, with an occasional level. The shallow soil of the uplands is suited for pasture, and the deep soil of the lowlands under careful tillage yields the richest crops. The uplands are gently rounded swellings of trap, overgrown with yellow stunted spear-grass. The District is somewhat bare of vegetation, and presents in many parts a bleak, treeless appearance. The chief rivers are the BHĪMA and its tributaries the Mān, the Nīra, and the Sīna, all flowing towards the south-east, with the exception of the Mān, which runs north-east for 50 miles within the limits of the District. Besides these, there are several minor streams. Of the principal reservoirs, Ekrūk and Siddheswar are near Sholāpur city, one is at Ashti, one is at Koregaon, and one at Pandharpur, and there are also water-supply works at Bārsi and Karmāla. The Ekrūk lake is one of the largest artificial pieces of water in the Presidency.

Geology.

As throughout the Deccan, the geological formation is trap, covered in most places with a shallow layer of very light soil, and in parts with a good depth of rich loam suited for cotton.

Botany.

The flora of Sholāpur is of the purely Deccan type. *Babūl*, mango, *nīm*, and *pīpal* are the only timber trees found. Among flowering plants the most common are *Cleome*, *Capparis*, *Cassia*,

Woodfordia, *Vicoa*, *Echinops*, *Celosia*, and several species of *Acacia*.

Fauna.

The District is too well tilled to leave much cover for wild beasts. The jackal, grey fox, antelope, and hare are, however, common. The commonest game-birds are: *kalam* (*Anthropoides virgo*), black and grey partridges, quail, and snipe. Bustard are scarce. The *maral* is noted among river fish.

Climate, temperature, and rainfall.

The climate, except from March to May, is healthy and agreeable. In the hot season, March to June, the mean temperature is 83°, very hot and oppressive in the day-time, but cool at night; it falls to 52° in November and rises to 108° in May: annual mean 80°. During the cold season, from November to February, the weather with keen easterly and north-easterly winds is clear and bracing. The rainy season is pleasant; the sky is more or less overcast, and the rain falls in heavy showers, alternating with intervals of sunshine. The annual rainfall averages 26 inches, being on the whole scanty and uncertain. Bārsi, owing to the proximity of the Bālāghāt hills, is comparatively well off with an average fall of 28 inches, while Mādha and Karmāla receive 26 and 23 inches respectively, but so unevenly distributed that only one out of every four seasons can be adjudged really satisfactory. Mālsiras has the lowest average, namely 22 inches.

History.

Sholāpur is one of the Districts which formed the early home of the Marāthās, and is still a great centre of the Marāthā population. In the early centuries of the Christian era (90 B.C.–A.D. 230) it probably formed part of the territories of the Sātavāhana or Andhra dynasty, whose capital was Paithan on the Godāvari, about 150 miles north-west of Sholāpur city. During the nine hundred years previous to the overthrow of the Deogiri Yādavas by the Muhammadans in the beginning of the fourteenth century, Sholāpur, like the neighbouring Districts of Bijāpur, Ahmadnagar, and Poona, was held by the early Chālukyas from 550 to 750, by the Rāshtrakūtas to 973, by the revived or Western Chālukyas to 1156, and by the Deogiri Yādavas till the Muhammadan conquest of the Deccan.

The first Muhammadan invasion of the Deccan took place in 1294, but the power of the Deogiri Yādavas was not crushed till 1318. From 1318 Mahārāshtra began to be ruled by governors appointed from Delhi and stationed at Deogiri, which name was changed in 1338 by Muhammad bin Tughlak to Daulatābād, the 'abode of wealth.' In 1346 there was widespread disorder, and Delhi officers plundered and wasted

the country. These cruelties led to the revolt of the Deccan nobles under the leadership of a soldier named Hasan Gangū. The nobles were successful, and freed the Deccan from dependence on Northern India. Hasan founded a dynasty, which he called Bahmani after the Persian from whom he claimed descent, and which held sway over the Deccan for nearly a hundred and fifty years. In 1489 Yūsuf Adil Shāh, governor of Bijāpur, assumed independence, and overran all the country north of Bijāpur as far as the Bhīma. For nearly two hundred years Sholāpur belonged either to the Bijāpur or to the Ahmadnagar Sultāns, as the one or the other succeeded in retaining it. In 1668, by the treaty concluded between Aurangzeb and Alī Adil Shāh of Bijāpur, the fort of Sholāpur and territory yielding Rs. 6,30,000 of revenue was ceded to the Mughals as the price of peace. The general decay of the Mughal empire from 1700 to 1750 opened the way for Marāthā supremacy. In 1795 the Marāthās wrested from the Nizām his Sholāpur possessions. The greater part of the District formed a portion of the Peshwā's dominions. On the overthrow of the Peshwā 430 villages passed to the British, the decisive actions being the battles of Pandharpur and Ashta (1817–8) and the siege of Sholāpur (1818). To the territory taken from the Marāthās, 232 villages ceded by the Nizām were added in 1822, and 488 more villages which lapsed in 1848 on the death of the Rājā of Sātāra brought the District to its present dimensions. It has been a Collectorate since 1838.

Archaeology. Traces of Yādava rule are to be found in the Hemādpanti temples at Bāvi, Mohol, MĀLSIRAS, Nāteputa, Velāpur, PANDHARPUR, Pulunj, Kandalgaon, Kāsegaon, and Mārde. There is a fine old well dating from this period at Mārde. Musalmān architecture is represented by the tomb of one of the daughters of Aurangzeb at the village of BEGAMPUR.

The people. There are 7 towns and 712 villages in the District. The population is approximately the same as it was in 1872. At the last four enumerations it has been: (1872) 720,203, (1881) 583,411, (1891) 750,689, and (1901) 720,977. The decrease of 19 per cent. in 1881 was due to mortality or emigration in the famine of 1876–8; and the decrease of 4 per cent. during the last decade is due to the famine years of 1896–1901. Part of this decrease has been made good by immigration since the famine. The distribution by *tālukas*, according to the Census of 1901, is given on the next page.

The chief towns are SHOLĀPUR, PANDHARPUR, BĀRSI, and KARMĀLA. The predominant language is Marāthī, which is

spoken by 82 per cent. of the population. Kanarese is spoken in the south of the District on the Bijāpur border. Of the total population, 91 per cent. are Hindus and 8 per cent. Musalmāns.

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Karmāla . .	772	1	123	67,558	88	− 28	2,893
Bārsi . .	596	2	122	139,435	234	− 5	6,934
Mālsiras . .	574	...	69	52,533	92	− 29	1,630
Mādha . .	619	...	89	82,984	134	− 10	3,558
Pandharpur .	478	2	83	91,928	192	+ 1	4,817
Sholāpur . .	848	1	151	203,905	240	+ 13	11,442
Sāngola . .	654	1	75	82,634	127	+ 5	2,013
District total	4,541*	7	712*	720,977	159	− 4	33,287

* The Agricultural department's returns give the total area as 4,547 square miles and the total number of villages as 718.

Among Hindus, Brāhmans number 29,000. The most important and the oldest settlers of this caste are Deshasths (24,000). The Vaishya Vānīs are the last remnant of the Hindu traders of the District, who are now mainly Lingāyats (51,000) and are known as Lingāyat Vānīs. Marāthās (220,000) are the strongest caste numerically and are mostly agriculturists. Mālīs or gardeners (24,000), found throughout the District, have two divisions, Khirsagur and Raut. Craftsmen include Sālis, Koshtīs, Devāng and other weavers (23,000), and Chamārs or shoemakers (16,000). Dhangars or shepherds (74,000) have three divisions—Bārgis, Hatgars, and Kutigars—which neither marry nor eat together. Kolīs (10,000) are divided into Marāthā Kolīs and Pānbhari Kolīs. Mahārs (66,000) and Māngs (28,000) are the watchmen and scavengers of the old village community. There are 37,000 Muhammadan converts from Hinduism, who describe themselves as Shaikhs. The population is supported mainly by agriculture (60 per cent.), industries and commerce supporting 19 per cent. and one per cent. respectively. Castes and occupations.

In 1901, 1,555 native Christians were enumerated, most of whom are converts of the American Marāthā Mission, which commenced work in the District in 1862. There are churches at Sholāpur, Dhotre, Vatvat, and a few other places. The American Protestant Congregational Mission is at work in Karmāla, and an inter-denominational village mission has a branch at Pandharpur. Christian missions.

General agricultural conditions.

The soil of Sholāpur is of three kinds: black, coarse grey, or reddish. Except in the Bārsi *tāluka*, where black soil is the rule and coarse grey is rare, most of the District is either grey or red. The black soil is chiefly confined to the banks of the rivers and large streams. On garden land manure is always used, and also on 'dry-crop' land when available. The usual mode of manuring a field is by turning into it a flock of sheep and goats, for whose services their owner is paid according to the length of their stay. Scarcity of manure is the main reason why so little land is watered, compared with the area commanded by the Ekrūk lake and other water-works. An industrious farmer ploughs his land several times before he sows it, and weeds it several times while the crop is growing. An irregular rotation of crops is observed, and about a fifth or sixth part of the holding is often left fallow. As a rule, the poorer landholders neither weed nor manure their land. They run a light plough over it, sow the seed broadcast, and leave it to itself. They expect to get from it at best merely a bare food-supply for the year; and while the crop is ripening, they supplement their field profits by the wages of labour. Much of the best land is in the hands of money-lenders, who have either bought it or taken it on mortgage. The tendency seems to be for the petty landholders to diminish, and the land to fall into the hands of men of capital who employ the old holders as their tenants or labourers. It may be accepted that only about 10 per cent. of the agricultural classes are free from debt, and that the remaining 90 per cent. are involved, and require advances from time to time. The Dekkhan Agriculturists' Relief Act, by protecting their property from attachment and sale for debt, has rendered this necessity less urgent.

Chief agricultural statistics and principal crops.

The District is almost entirely *ryotwāri*, only about 7 per cent. being held as *inām* or *jāgīr* land. The chief statistics of cultivation in 1903-4 are shown below, in square miles:—

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.	Forest.
Karmāla	772	595	14	11	80
Bārsi	597	536	23	...	13
Mālsiras	574	472	18	5	33
Mādha	619	521	21	1	49
Pandharpur	478	430	13	1	10
Sholāpur	848	725	14	4	60
Sāngola	659	574	24	2	32
Total	4,547*	3,853	127	24	277

* The figures in this table are based on the latest information.

The staple food-grain of the District is late *jowār* (1,521 square miles). In Mālsiras and Sāngola *bājra* (521 square miles) is equally important. Wheat (82 square miles) is chiefly an irrigated crop, and is of inferior quality. Of pulses, *tur* (155 square miles) and gram (104) are important; *math* and *kulith* occupy 64 and 37 square miles respectively. Oilseeds (292 square miles) are grown in rows among the *jowār*. Of other crops, chillies (9 square miles), cotton (72 square miles), and *san*-hemp (45 square miles) are the most important.

Improvements in agricultural practice. There has been a gradual tendency of late years to discard old forms of field-implements in favour of more modern appliances; and especially is this the case with iron sugar-cane presses and iron ploughs. The latter were exhibited in Bombay in 1904, and have been ordered by several cultivators. Iron lifts for wells have also taken the place of leathern bags in many places. The opening of cotton-mills in Sholāpur city has led the people to pay more attention to seed-selection and staple; while the better kinds of manure are now largely employed for sugar-cane cultivation. During the ten years ending 1904, 18·3 lakhs was advanced to agriculturists under the Land Improvement and Agriculturists' Loans Acts. Of this sum 5 lakhs was advanced in 1896–7, and 9 lakhs during the three years ending 1901–2.

Cattle, ponies, &c. The chief breeds of cattle are the *khilāri*, raised by Dhangars; the *desi*, bred by Lamānis; and breeds from Mālwā, Gujarāt, and Gokāk in Belgaum. The *khilāri* breed is the best, and the *desi* is the commonest. Buffaloes are classed as *gaulis* or 'milkmen's,' and *desi* or 'local.' The famine of 1876 and the Afghān War of 1879 combined to deprive Sholāpur of its reputation as a pony-breeding District. The Civil Veterinary department, however, maintains 3 pony stallions at Sholāpur, Sāngola, and Karmāla. The dry plains of the southern *tālukas* are specially suited for rearing sheep and goats. The Dhangars breed flocks of sheep, and the poorer classes keep goats. Donkeys are bred by Beldārs or quarrymen, and pigs are reared by Vaddars or earth-workers.

Irrigation. The chief irrigation works in Sholāpur District are the Koregaon, Ashti, Ekrūk, and Mhasvād lakes. The first-named is a pre-British work improved, and the three last are new works. Large projects have been undertaken at Patri, Budhihal, Bhāmburda, Wadshivne, Hotgi, and Mangi. The total area under irrigation from various sources in 1903–4 was 127 square miles. Government works supplied 12 square miles, private canals one square mile, wells 111 square miles, tanks

one square mile, and other sources 2 square miles. Koregaon lake, 13 miles north-east of Bārsi, is formed by throwing two earthen dams across two separate valleys. The lake has now a capacity of 81,000,000 cubic feet and supplies 282 acres of land, the estimated irrigable area being nearly 2 square miles. The Ashti lake lies in the Mādha *tāluka*, 12 miles north-east of Pandharpur. The lake when full holds 1,419,000,000 cubic feet of water. It is estimated to irrigate 19 square miles, and actually supplies about 2 square miles. The Ekrūk lake, the largest artificial lake in the Bombay Presidency, lies 5 miles north-east of Sholāpur city. The lake is 60 feet deep when full, and holds 3,310,000,000 cubic feet of water. It supplies 4 and commands 26 square miles. The Mhasvād tank in Sātāra District, recently constructed by throwing a dam across the Mān river, supplies 7 square miles of land with water, and could irrigate 38 square miles. The capital outlay on these tanks has been (1903-4): Mhasvād 21 lakhs, Ekrūk 13, Koregaon $\frac{2}{5}$, and Ashti 8 lakhs. There are 24,629 wells in the District, with an average depth of 15 to 40 feet, of which 20,865 are used for irrigation.

Forests. The dry, shallow soil of the uplands of Sholāpur is ill-suited for trees. The District now possesses 219 square miles of 'reserved' land under the Forest department. The fodder reserves and pasture land in charge of the Revenue department amount to 58 square miles. There are no 'protected' forests. The forest area is much scattered. It may be roughly divided into two tracts: on the hills between Bārsi and the Nizām's territories in the extreme north-east, and on the hills to the south of Mālsiras and Sāngola in the extreme south-west. Before December, 1871, when forest conservancy was introduced, Sholāpur was extremely bare of trees and brushwood. In the whole of the forest area, no timber-cutting rights are admitted to exist. The forest lands are of two classes: scrub forest and *babūl* meadows. The scrub forest is found on the hills, and *babūl* meadows occur all over the District.

Forest receipts are comparatively small, being only Rs. 18,000 in 1903-4. About nineteen-twentieths of the Reserves are leased yearly for grazing; the remainder are leased yearly for grass-cutting, and in these tree plantations are formed. The timber of the *babūl* and the *nīm* are used for fuel, and also for making beams, posts, doors, carts, ploughs, and other implements. The bark of the *babūl* and of the *tarvad* (*Cassia auriculata*) is used for tanning, and the pods as well as the flowers

of the *palās* (*Butea frondosa*) for dyeing. The bark of the *apta* is made into ropes. The forests are in charge of an Extra-Assistant Conservator.

Minerals.

Except trap or basalt used as building stone and for road-metal, and nodular limestone used in cement, Sholāpur has no mineral products.

Arts and manufactures.

The chief industries are spinning, weaving, and dyeing. Silks and the finer sorts of cotton cloth, such as *dhotīs* and women's *sārīs*, prepared in Sholāpur, bear a good name. Blankets are also woven in large numbers. Besides hand-loom weaving, three cotton-mills, with 144,520 spindles and 528 looms, have been established, which give employment to 5,239 hands daily, and turn out 14,000,000 lb. of yarn and 2,000,000 lb. of cloth. The mill of the Sholāpur Spinning and Weaving Company began working at Sholāpur city in 1877 with a nominal capital of 8 lakhs. In addition to the cotton-mills, there are two ginning factories, employing about 174 operatives. Oil-presses of the native type are worked by Telīs in many places, and salpetre is manufactured to some extent by Mahārs and Māngs.

Commerce and trade.

Since the opening of the railway, trade has greatly increased. Next to cotton, a large proportion of which comes from other Districts, the chief exports are oil, oilseeds, *ghī*, turmeric, and cotton cloth. The imports are salt, piece-goods, yarn, gunny-bags, and iron-ware. Trade is carried on at the towns and in markets, fairs, village shops, and also by travelling carriers. The largest centres of internal trade are Sholāpur city, Bārsi, and Pandharpur; and next to these Vairāg, Mādha, Mohol, Karmāla, Aklūj, Nāteputa, and Sāngola. The traders are chiefly Lingāyats, Bhātias, Hindu Vānīs, and Mārwāris.

Communications. Railways and roads.

The south-east line of the Great Indian Peninsula Railway, which connects with the Madras Railway at Raichūr, passes through the District with a length of 115 miles. From Hotgi near Sholāpur city, the eastern branch of the Southern Mahratta Railway runs south towards Bijāpur, for a distance of about 8 miles within the District. At Bārsi Road a pioneer enterprise in light railways connects Bārsi town with the Great Indian Peninsula Railway. This line, which is on a 2 foot 6 inch gauge, was opened in 1897. Extensions of the Bārsi Light Railway to Tādwaila, 27 miles beyond Bārsi town, and to Pandharpur, were opened in 1906. There are (1904) 567 miles of roads in the District, of which 140 miles are metalled. Of these the Poona-Hyderābād trunk road is the most important, traversing the District in a south-easterly direction for

78 miles. Except 341 miles of unmetalled roads in charge of the local authorities, all these roads are maintained by the Public Works department. The Bārsi Light Railway Company maintains and repairs 21 miles of metalled road.

Famine. The earliest recorded famine is the great Durgā-devī famine, which began about 1396 and is said to have lasted nearly twelve years. Next came the famine of 1460. About 1520 a great famine is said to have been caused by military hordes destroying and plundering the crops. The famine of 1791 was very severe, especially in the Carnatic, where the crops entirely failed. In the Deccan the yield was one-fourth to one-half the usual out-turn; and as thousands flocked from the Carnatic to the Deccan for food, the distress became very severe. During this famine grain sold at 3 seers a rupee. In 1802 the plunder and destruction of crops by Holkar and the Pindāris caused a serious scarcity, which the failure of the rains in October and November, 1803, turned into a famine of terrible severity. In 1818, owing partly to the ravages of the Peshwā's armies, and partly to the failure of crops, the District again suffered from famine, accompanied by cholera, which destroyed thousands. Other famines or scarcities occurred in 1824, 1832–3, 1845, 1854, 1862, 1876–7, 1896–7, and 1899–1900, owing to scanty rainfall.

In the famine of 1876–7 the District suffered very severely. At the height of distress the largest number on works was 95,617 in January, 1877. A considerable number of people left the District and went to Berār and the Nizām's Dominions, and many cattle died. During the cold season of 1879, from January to March, swarms of rats and mice appeared and about seven-eighths of the crops were wholly destroyed. The scanty rainfall of 1896 caused a failure of the crops throughout the whole of the District, thus necessitating relief measures. The largest number on works was 124,800 in April. The maximum number on gratuitous relief was 15,600 in September. The distress continued till the end of November. The last scarcity, which extended over two consecutive years, was in 1899–1901. In October, 1899, relief works were opened which continued till October, 1902. The maximum on relief was reached in April, 1900, when nearly 156,000 persons were on works and 13,000 in receipt of gratuitous relief. By August, 1900, the number on gratuitous relief had reached 25,000. The excess of mortality over the normal in 1899–1900 was 18,800, and it is calculated that 70,000 cattle died. Including advances to agriculturists and weavers, and remissions of land

revenue, the famine in this District alone cost the state 84 lakhs. More than 10½ lakhs was advanced under the Land Improvement and Agriculturists' Loans Acts.

District subdivisions and staff.

The District consists of seven *tālukas*, in two subdivisions under an Assistant Collector and a Deputy-Collector. The *tālukas* are SHOLĀPUR, MĀDHA, KARMĀLA, BĀRSI, PANDHARPUR, SĀNGOLA, and MĀLSIRAS. The Collector is Political Agent for the State of Akalkot.

Civil and criminal justice.

The District and Sessions Judge at Sholāpur is assisted for civil business by six Subordinate Judges. There are twenty-eight officers to administer criminal justice in the District. The proximity of the Nizām's Dominions facilitates dacoities by small bands of bad characters, who take refuge across the frontier. The commonest forms of crime are theft and hurt.

Land revenue administration.

Sholāpur is mainly *ryotwāri*. The revenue history of the District differs little from that of AHMADNAGAR and POONA, of which many of the villages once formed a part. Like those Districts, Sholāpur, after a few years of rapid advance after British annexation, suffered from 1825 onwards from low prices, and large remissions had in consequence to be granted. In 1830 the old rates were replaced by Mr. Pringle's settlement; but the new rates again proved excessive, mainly owing to the bad seasons which followed their introduction, and in consequence temporary rates were granted between 1836 and 1839 on more favourable terms. In 1840 a regular revenue survey settlement was commenced by Captain Wingate, and was gradually introduced into the whole of the District. The revision survey of the Mādha *tāluka* led to revised rates being introduced in that *tāluka* in 1869–70 and extended to the whole of the District by 1874. In October, 1874, in consequence of the marked fall in produce prices during the three previous years, Government decided that it was advisable to limit, and in some cases to reduce, the amount of the enhancements made at the revised survey settlement. The reductions made were from 74 to 38 per cent. in Mādha, from 77 to 44 per cent. in Sholāpur, from 76 to 46 per cent. in Pandharpur, and from 62 to 42 per cent. in Bārsi. The revision survey of 1874–94 found an increase in the cultivated area of 0·4 per cent., and the settlement enhanced the total revenue by 27 per cent. in the three *tālukas* for which details are available. The average rates per acre fixed by this survey are: 'dry' land, 8 annas; garden land, 15 annas; and rice land, Rs. 1–6.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees :—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	10,61	11,94	9,41	15,42
Total revenue . .	14,46	16,89	14,57	21,77

Municipalities and local boards.

There are five municipalities—SHOLĀPUR, BĀRSI, KARMĀLA, SĀNGOLA, and PANDHARPUR—with a total income averaging 2·8 lakhs. Among special sources of municipal income are a pilgrim tax at Pandharpur and a water rate at Sholāpur. The District board and seven *tāluka* boards had an income of 1·5 lakhs in 1903–4, the principal source being the land cess. The expenditure amounted to 1·2 lakhs, including Rs. 45,000 devoted to the maintenance and construction of roads and buildings.

Police and jails.

The District Superintendent of police is aided by two Assistants and one inspector. There are 12 police stations in the District. The total strength of the police force is 579: namely, 9 chief constables, 109 head constables, and 461 constables. The mounted police number 7, under one *daffadār*. There are 8 subsidiary jails in the District, with accommodation for 197 prisoners. The daily average number of prisoners in 1904 was 70, of whom 5 were females.

Education.

Sholāpur stands fifteenth as regards literacy among the twenty-four Districts of the Presidency. In 1901 only 4·7 per cent. of the population (8·9 males and 0·4 females) could read and write. In 1881 there were 174 schools with 7,060 pupils. The number of pupils increased to 14,711 in 1891 and to 14,984 in 1901. In 1903–4 the number of educational institutions was 297, including 2 high schools, 7 middle and 258 primary schools, one training school, 2 industrial schools, and one commercial school; and the number of pupils was 6,162, including 547 girls. Of the 271 schools classed as public, one is managed by Government, 175 by local boards, 36 by municipalities, 57 are aided and 2 are unaided. The total expenditure on education in 1903–4 was 1¼ lakhs, of which Provincial revenues contributed Rs. 47,000, Local funds Rs. 27,000, and fees Rs. 16,000. Of the total, 70 per cent. was devoted to primary schools.

Hospitals and dispensaries.

The District contains two hospitals, including one for females, 8 dispensaries, one leper asylum, and 3 other medical institutions, with accommodation for 83 in-patients. In 1904 the number of patients treated was 151,682, of whom 1,118